

# Exploring Place-Based Education While Reflecting on My Own Place Growing Up in West Virginia

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## ABSTRACT

Place-based education (PBE) will be explored while weaving in my own experiences with place growing up in West Virginia surrounded by the coal industry. PBE is a teaching method that provides meaningful instruction for students by transforming their community or place into their classroom. PBE can teach students how to truly inhabit their places and become contributing citizens by helping their communities or places improve and eradicate any prevalent issues. The coal industry is still predominant in West Virginia even though it continues to bring destruction to the land and controversy among the residents. The coal industry was a prime example for PBE focus while I was student in K-12 schools in West Virginia, and I will present information for why it should continue to be a focus for PBE.

## KEYWORDS

*place-based education, community-based education, community centered instruction, West Virginia, coal industry*

## INTRODUCTION—BEYOND ONE-SIZE-FITS-ALL (OR NONE) BOXED CURRICULUM

Meaningful instruction does not begin with worksheets and busywork. Meaningful instruction begins with authentic, problem-based, community-centered, student-centered activities. As a newcomer to the idea of place-based education (PBE), I want to make it clear that I am not an expert in PBE nor am I claiming to be one. The research I have read on PBE in my doctoral program has been presented by educators who have years of experience with PBE and are much more knowledgeable when it comes to implementing PBE. Reviewing research conducted by experts and/or knowledgeable educators can be intimidating for others who are implementing new-to-them practices like PBE. PBE is not a new concept, as this way of teaching our youth has been around since before the formation of formal education (Smith, 2016). For any educator looking to provide their students with meaningful experiences that goes outside the four walls of their classroom and beyond the one-size-fits-all, or none, boxed curriculum, I will use what I have learned from my research to provide a rationale for utilizing PBE and implementing ideas from a novice point-of-view. While learning about expanding the classroom into the community, I started to reflect on my own experiences with place in education.

Although PBE extends the classroom outside to local places, textbooks and boxed curriculums do not need to be completely discarded. If your school district requires the use of certain textbooks and/or provided curriculums, you can use the content found within these resources to expand into PBE practices. For example, if the textbook or provided curriculum focuses on ecosystems or immigration, you may want to explore these topics in the areas that

are local to your school community to provide authentic experiences that include opportunities for learning across multiple content areas.

## What is Place-Based Education (PBE)?

PBE can be difficult to define because people implement it differently based on what their place has to offer and not everyone teaches the same way (Gruenewald et al., 2010; Deringer, 2017). Gruenewald et al. (2010) explained that "...place-based education is not something that can be packaged and then disseminated. It depends on the creative interaction between learners and the possibilities and requirements of specific place" (p. 4). PBE is a teaching method that takes students beyond the classroom, boxed curriculums, and textbooks. This teaching method involves exploring your neighborhood or area, which can lead students to find issues. These issues can become the focus of lessons and activities that expand across content areas and may continue for weeks or months within a school year. PBE is not one field trip or isolated event that brings the outside into the classroom; however, these field trips and events may lead to a focus on PBE. Gruenewald et. al (2010) used the following definition of PBE by David Sobel as:

The process of using the local community and environment as a starting point to teach concepts in language arts, mathematics, social studies, science, and other subjects across the curriculum. Emphasizing hands-on, real-world learning experiences, this approach to education increases academic achievement, helps students develop stronger ties to their community, enhances students' appreciation for the natural world, and creates a heightened commitment to serving as active, contributing citizens... (p. 7)



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PBE is a method of teaching that incorporates interdisciplinary practices and results in transdisciplinary skills that will be applicable in multiple areas and the real world. Experiences in real life are not necessarily linear and categorized by singular content areas (Ark et. al, 2020). For example, paying bills may require the use of mathematics and reading; voting may utilize skills in reading, social sciences, and mathematics; and cooking or baking may combine math, reading and science skills.

The experiences needed to improve our places to make them more sustainable and beneficial to all who reside or inhabit in a place is not necessarily found in the textbooks and boxed curriculums. Furthermore, Smith et. al (2010) explained place-based education as:

an approach to teaching and learning that connects learning to the local...to prepare children to become participants in the local problem-solving...as humanity adjusts to the consequences of climate change, economic globalization, and resource exhaustion...Replacing fossil fuels and reinventing sustainable farming and manufacturing processes will demand the intelligent involvement of large numbers of widely dispersed people. (p. viii)

To thrive in the real world, our students must learn how to navigate, become change agents, and participate in the real world.

### Why Place-based Education (PBE)?

Education as an impactful event on one's life is not created by hundreds of worksheets or busywork. "Engagement is a critical factor in improving academic achievement" (Gruenewald et. al, 2010, p. 74). Educators that have utilized place-based education have reported an increase in motivation and engagement and a decrease in discipline issues (Gruenewald et. al, 2010; Smith et. al, 2010; Ark et. al, 2020). Place-based education allows teachers and students to have autonomy and encourages students to embrace who they are as individuals in terms of experiences, perceptions, cultures, languages, and community. When teachers have autonomy, they are more motivated and invested in their instructional practices and students benefit from this investment. Allowing students to have autonomy, increases student motivation and engagement. When students are engaged and motivated, they are less likely to have misbehaviors and are more likely to find success in academics. Also, students classified as low performing achieve more when using place-based education because they can utilize their strengths while working with others who can compensate for areas of weakness (Bass, 2019; Biviano, 2019; Gruenewald et. al, 2010; Smith et. al, 2010).

When PBE is implemented in classrooms, students learn more than the expected content for achievement tests and tend to score higher on achievement tests. "An education grounded in place and community is connected to what is important in students' own lives" (Smith et. al, 2010, p. 35). When students are motivated in their learning, school becomes less of an obligation and becomes an experience that influences the lives of students. When PBE is implemented with students living in challenging places, they may become engaged in improving their communities rather than escaping them. Additionally, PBE that incorporates local and global investigations provides opportunities for classrooms to be more culturally responsive than a teacher may be on his or her own (Gruenewald et. al, 2010; Bass, 2019; Biviano, 2019, Smith et. al, 2010; Ark et. al, 2020).

When looking back at my own experiences in public K-12 schools, worksheets are not what I remember. Below are experiences I remember from my time as a student in public K-12 schools and how it may have impacted my life. While these experiences may have been isolated events and not true to PBE form, they are included as a reminder of how education can impact one's life. Additionally, some of the isolated events discussed below could have been turned into more long-term PBE topics.

- My kindergarten teacher had a clawfoot tub filled with pillows in the reading section of the classroom. We took turns reading in the clawfoot tub, and I remember being so excited when it was my turn. I believe this early exposure to reading as a fun activity set me on a path to be an avid reader and a reading specialist. As an educator I hope to instill the same love of reading in my students.
- In first grade, I remember going to a local nursery to learn about plants. This one experience did not necessarily prompt me to grow my own plants because I came from a family and area that grew our own gardens and flowers. However, I'm sure it was a small contribution to my love of gardening.
- My middle school science teacher enlisted us to help build a wetland below our school to help reduce pollution from the coal mines. This activity combined with an Appalachian literature class I took in college, which I will explain in more depth in another section, exposed me to the destruction caused by coal mines and how it goes beyond damage to the land. The wetland project, and stories I read in my Appalachian literature class have impacted my response to my places. While I may not be able to eradicate coal mines, I do what I can to help make my places healthier and more viable by supporting renewable resources and recycling.
- In high school, I shadowed a nurse at our local hospital for a day to see if I wanted to become a nurse. I, obviously, changed my mind and did not become a nurse, but at least I had the opportunity to go out into my community and explore career options. Instead, I went on to become an English teacher, reading specialist, and an administrator.

Again, none of the above memories from my K-12 experiences are based on a worksheet or busywork. I cannot name one worksheet I completed and how it impacted my life. Not all experiences above are related to place or place-based education, but the point is that meaningful instruction and opportunities can impact a student's life, and worksheets do not make a lasting impression. Students quoted in Gruenewald et. al (2010), shared a similar reflection based on the projects they completed while collecting the history of their community. One student described his experience with place-based education this way:

You learned about the history of our town through the stories of real people...I remember so much more from those interviews and research projects than from most of the courses I've taken in high school...where we just do work, pass the test, and then forget stuff we supposedly learn. (Gruenewald et al., 2010, p. 66)

Meaningful instruction, like PBE, leaves an impact on a child, prepares them to be a contributing citizen in their community, and teaches them to be adaptable as the world changes.



## TO RESIDE OR INHABIT

Our society and advances in technology have created a lack of awareness of the here and now and involvement in our places. Instead of being in the moment, exploring our places, and becoming truly involved with our places, we experience mindlessness (Deringer, 2017) by being glued to screens and too afraid, or ill-prepared, to become involved with our surroundings. Gruenewald et. al (2010) used David Orr's differentiation of residing and inhabiting from *Ecological Literacy* (1992); "the resident...lives in the indoor world of house, office, car, and television, and the inhabitant...knows their place, cares deeply about it, and has a mutually sustaining relationship with it" (p. 284). As a society we need to take pause, be in the moment, listen to the people in our places, understand the history of our places, and inhabit our places by building a relationship with them. Relationship building with our places can create an awareness of the good and the bad that exists. Awareness of the bad can help citizens, starting with our youth, eradicate the issues in our places that stifle progress or makes others unwelcomed.

Having a relationship with our place can be beneficial emotionally, mentally, socially, economically, and environmentally (Gruenewald et. al, 2010; Smith et. al, 2010; Ark et. al, 2020). Our youth, the future of our places, must be provided with experiences to inhabit their places and be trained on how to become contributing, democratic, decision-making citizens. Additionally, we need to teach our students how to be mindful of their places. Being mindful is defined by E. J. Langer in *Mindful Place-Based Education: Mapping the Literature*, as being "implicitly aware of the context and content" (Deringer, 2017, p. 338). Once students experience the community as their classroom and are provided with opportunities to make a difference, they become more aware of how their place functions and are equipped to thrive in new places in an ever-changing world. "As students see that they are valued members of the community, they also begin to see the role they could play as adults: as an employee, a citizen, a parent, or a volunteer" (Ark et. al, 2020, p. 26). Such change can begin in our schools by providing students with meaningful instruction focused on place-based education.

## My Places—Where I've Been and Where I Am

Learning about place-based education has led me to ponder where I have been and where I am. I was born in a small-town in West Virginia in 1987, and I have lived in various places in northern West Virginia. In 2010, I moved to southwest Virginia where I started my career in education. My reflections have led me to question if I truly know these places, the people, and the history. There are so many details I do not remember from places of my past or know about my current places. If I am so out of touch, then how am I truly involved and contributing to the greater good of my places?

## Friends or Foes of Coal? (Background)

Growing up in West Virginia, my experience with this place is that coal was and is still very important to the livelihoods of many residents. Many West Virginians have coal dust running in their veins because the history of working in the coal industry extends so far back in their ancestry. Many families in West Virginia were started by immigrants who moved to the United States solely to work in the coal mines in West Virginia.

Between 1880 and 1920, southern West Virginia's population grew from 93,000 to 446,000, due almost entirely to the coal industry. The region's first coal miners primarily were African Americans, both enslaved and free... Coal companies also recruited in Europe... Immigrants in southern West Virginia comprised some 25 nationalities, including Italians, Hungarians, Poles, Austrians, and Russians. (National Coal Heritage Area & Coal Heritage Trail, n.d.)

As I read Misiaszek's, *Ecopedagogy as an Element of Citizenship Education: The Dialectic of Global/Local Spheres of Citizenship and Critical Environmental Pedagogies* (2016), my mind went to West Virginia coal mines. Despite the information available that coal mines destroy the land, houses, structures, and lives, my experience is that many West Virginians continue to fight to keep the coal industry as a source of jobs. In West Virginia, even today, the main career path for many is to become a coal miner. Currently, West Virginia is the second largest coal producer in the United States (Independent Statistics and Analysis, 2020).

There is a lack of emphasis on other careers related to what is available in West Virginia. Many West Virginians believe that their livelihoods are being destroyed when renewable resources are presented as possible replacements to the coal industry. This fear and reluctance to replace the coal industry with renewable resources is aligned with the neoliberalism framework, which:

ignore all biocentric (holistically nature-centered) perspective, unless there is a direct monetary value associated with nature to profit... An example of existing powerful interests is that alternative energy can lead to similar and even increased economic prosperity, but economic losses would occur within longstanding powerful entities such as oil industries. (Misiaszek, 2016, p. 594)

The oil industry example above is like the same fear West Virginians have about the coal industry being replaced by renewable resources. However, coal culture and oil culture can be very different in terms of place.

Oil culture embraces the idea of moving around looking for oil, so there is movement among people from place to place. Whereas people in coal culture become stagnant because of the history of coal companies making it very difficult for people to move from place to place.

By 1922, nearly 80 percent of West Virginia miners lived in company houses. Coal companies stripped down the forests to erect simply designed houses, schools, and churches, all within close proximity of the mines. All life in company towns revolved around the company-owned store. Since these towns were located in isolated areas, the company store offered the only option for buying groceries, mining tools and other goods. (National Coal Heritage Area & Coal Heritage Trail, n.d.)

Often coal companies paid miners in "scrips" which were only useful in businesses owned by the coal company (Eggleston, 2017). Coal scrips combined with the isolated locations made it nearly impossible for families to move to different places. This history of staying in one place has become part of the culture in West Virginia.

## Friends or Foes of Coal? (Wetland Project)

After reflecting on growing up in West Virginia and the importance of coal, I, now, understand how brave my middle school science teacher, Mr. Martin, was in 1999, as he tried to expose us to



the damage caused by coal mines. The most obvious damage was our water, which ran red, smelled like rotten eggs, and was undrinkable. He, also, tried to inspire us to correct this damage by showing us how to create a wetland to help filter out the pollution. With his guidance, we built a wetland below our middle school. I'm not sure if Mr. Martin knew he was utilizing place-based education, but he certainly brought awareness to me about the damaging effects of coal mines in my place. Additionally, he provided us with an experience outside of our textbooks and provided curriculum that allowed us to try to improve our place, so it was more sustainable and beneficial to all who resided or inhabited our small town in West Virginia. PBE is not a new method of teaching, as it was how most youth were taught by the elders before the formation of formal education (Smith, 2016). When I go back home to visit, I cannot help but to look to see if the creeks, streams, and rivers still run red and smell like rotten eggs. Unfortunately, some areas do still show signs of pollution from the coal mines.

If I were an educator or administrator in West Virginia today, I am not confident that replacing coal mines with renewable resources or highlighting the damage caused by coal mines, as my middle school science teacher had shared with us, is a place-based education topic that I would approach for fear of repercussion from colleagues, school administration, and/or the community. The replacement of the coal industry with renewable resources and highlighting the damage caused by coal mines is a politicized and an intense conversation for many residents in West Virginia. Many West Virginians are passionate about coal and cannot see a future without it despite the damage it causes locally and globally. Thus, "...the understanding that all environmentally harmful actions are likely to have some human benefit for someone...because otherwise the human action would not be initiated" (Misiaszek, 2016, p. 590). The fear of losing their livelihood is far more important to many West Virginians than the land being destroyed. Coal as a source of income has been rooted in their past, present, and future. However, for any educator in West Virginia wanting to implement PBE, the coal industry would most likely be an obvious issue that could arise when examining one's place in West Virginia and should not be ignored for fear of retaliation. The damage caused by coal mines would become more apparent later in my life while taking an Appalachian Literature class at West Virginia Wesleyan College and witnessing this damage firsthand as it effects relatives and neighbors who live near my family.

### Friend or Foe of Coal? (Appalachian Literature)

While attending West Virginia Wesleyan College from 2005-2010, I enrolled in Appalachian Literature to satisfy a credit for my English major. Two books, *Storming Heaven: A Novel* (1999) and *The Unquiet Earth* (1994), both by Denis Giardina, read in this class would expand my understanding on the severity of loss caused by coal mines. Reading these two books, I would come to understand the destruction caused by coal mines was not isolated to the land. Livelihoods were, also, devastated because of unfulfilled promises of coal mines that died out and no longer provided jobs in areas where the main source of jobs were coal mines. Furthermore, lives were lost when the land could no longer bear the destruction caused by mining.

The flood in *The Unquiet Earth* (1994), was based on the Buffalo Creek Flood of 1972. Coal mine officials knew about the risk of the Coal Slurry Impoundment #3 dam bursting due to an

abundance of rainfall, but they did not necessarily warn the residents with ample time to evacuate. When the dam at #3 failed, the dams at #1 and #2 also failed because they were downstream. Millions of gallons of coal slurry came down Buffalo Creek destroying more than 500 homes and killing 125 residents (Gee, n.d.). In *Storming Heaven* (1999), coal was the cause of many deaths when coal miners erupted in a battle, the Battle of Blair Mountain, to unionize in southwestern West Virginia to make deplorable working conditions safer, receive better pay, and to be treated more humanely (Andrews, 2016). "In late August 1921, union miners and coal company supporters clashed near Blair Mountain, West Virginia, in what has been called the largest armed uprising since the Civil War (Andrews, 2016)." West Virginia has a culture and history that embodies the fight for coal and this fight continues today. Examining the history of coal industries could lead to another focus for place-based education in West Virginia. Students could compare coal industry issues from the past with the current issues of today in one's place and present and/or work toward solutions for these concerns.

### Friends or Foes of Coal? (Home Among the Hills—To leave or to stay?)

Many West Virginians continue to depend on the coal industry for their livelihoods in 2022. The current governor, Jim Justice, has a long family history rooted in the coal industry and inherited a large coal company, Bluestone Industries, Inc., from his father (Office of the Governor, n.d.). Governor Jim Justice and coal organizations, like *Friends of Coal*, promote the utilization of coal mines in West Virginia by promising jobs for the future. One of the mission statements of *Friends of Coal* declares, "By working together, we can provide good jobs and benefits for future generations, which will keep our children and grandchildren close to home" (Mullins, 2021). As a reminder, many West Virginians have continued to stay in one place because historically it was difficult to move out of coal company owned towns that were in isolated areas, and this mindset to stay in one's place continues for many West Virginians today.

The forementioned mission statement from *Friends of Coal*, illustrates that coal companies continue to encourage West Virginians to stay in their home among the hills because coal will provide for them (Mullins, 2021). Some West Virginians, particularly the younger generation, do, eventually, leave their home among the hills for better opportunities because West Virginia does not have a viable job market outside of coal. As a result, I was the first member of my immediate and extended family to move out of West Virginia because jobs in education were not readily available and teacher salaries were far less than some surrounding states. My family, especially my mom, found this transition difficult, and aunts and uncles will occasionally ask me when I am moving back home, even though I have been gone for 12 years now.

Perhaps if place-based education had been fully utilized during my time as a K-12 student in public education, and even in my college years, my peers and I could have problem-solved issues in our community to help it become more prosperous and progressive. If my place were able to provide me with more job opportunities, then I would not have felt compelled to leave. People leaving and not moving into West Virginia has become such an issue that in April of 2021, the state along with West Virginia University and Brad Smith, a West Virginia native and former CEO of Intuit, "...launched a new initiative offering remote and self-employed workers \$12,000 and a year-long pass for free outdoor activities—and all you have to do is





relocate to the 'wild and wonderful' mountain state for at least two years" (Lewis, 2021). The idea behind this initiative is to stimulate the economy in West Virginia by putting money into the pockets of people to spend. This offer came during the COVID-19 pandemic when many people were working remotely and enjoying more outdoor activities to avoid the transmission of the virus. Notice those who qualify for this initiative must already have jobs outside of West Virginia because the job market in West Virginia is lacking. Additionally, the team behind this initiative "...is hoping that the lower cost of living will encourage participants to stick around" (Lewis, 2021).

### Friends or Foes of Coal? (Coal Mine Destruction Hits Home)

Damage from coal mines continues to happen today despite the awareness and advances in science and technology. Because many West Virginians are unable to see a future without coal, they are unable to:

realize that coal companies and their organizations are not here for our benefit. Their primary goal is to gain support and promote legislation that make it easier for them to rip coal out of the ground no matter the cost to coal miners or the people living nearby. (Mullins, 2021)

Many West Virginians gave their lives working in the unsafe conditions in coal mines or suffered years later from the effects of these unsafe conditions. My maternal grandfather was a coal miner, who suffered from black lung disease long after he retired from the mines and eventually died from complications due to this disease.

Furthermore, my family currently lives in an area in the northern part of West Virginia that is atop a new coal mine. Neighbors and family members in the area have experienced damage or complete destruction to their homes, pools, barns, and garages due to the ground shifting. Driving down the country roads in this area, you will notice many homes, garages, and barns are currently being held up by frames made from 2x4s to help stop the structures from completely collapsing. My family worries about their house experiencing the same kind of damage. Each time their house makes a noise, they cringe in fear that their home will start to show cracks in its walls and foundation. Again, I wonder if place-based education had been utilized while I was a student in K-12 schools and in college in West Virginia or with current students, if a large group of peers working together and truly inhabiting the place would have been able to problem-solve these issues created by the coal industry.

### PBE IN YOUR PRACTICE

For any educator wanting to implement place-based education school wide, I caution you to not require it of everyone at once. School-wide initiatives that require educators to implement certain practices are rarely successful. Not everyone is always in the right head space that allows them to welcome new practices. Additionally, teaching is an art and not everyone teaches the same way. Professional development (PD) that takes a grassroots approach and makes new ideas available to those who are open to the possibility of a new practice can be more successful (Bertling et. al, 2018). PBE may become school-wide once others start to see

successes from those more comfortable of implementing the new practice.

PBE can be implemented in urban, suburban, rural, and virtual classrooms (Gruenewald et. al, 2010; Smith et. al, 2010; Ark et. al, 2020), and PBE is not only for the students who come from higher-socioeconomic households (Ark et. al, 2020). PBE can be implemented by any educator who is willing to step away from the safe space of worksheets and busywork, explore the places around their school, allow students to have autonomy, and learn along with their students (Gruenewald et. al, 2010; Smith et. al, 2010; Ark et. al, 2020). Below in Table 1 are ideas for implementing PBE with space for you to jot down if the idea is applicable to your class and how it can be applied in your school's place. While reading about PBE, I found it helpful to make a chart of PBE ideas with notes on how it could be implemented in my school. While other resources used for this paper have ideas for implementing PBE, the ideas in Table 1 are from *The Power of Place: Authentic Learning Through Place-based Education* (Ark et. al, 2020) because this book was full of ideas for implementing PBE. I am not discounting the ideas found in the other articles or books listed in my references. If you feel compelled to inquire about PBE further, please visit any of the relevant sources in my reference list. What I have presented in this essay is only a fragment of what PBE is, its benefits, and ideas for implementing this teaching method.

Table 1. PBE Ideas

PBE Activity Ideas	Is this activity applicable to your classroom? How so?
Presentations to school board/local government about how to improve parks/playgrounds	
Explore ecological components of a place (i.e., parks, trails, creeks, schoolyard, etc.)	
"Read the local paper and community notices, talk to business owners and employees, and introduce yourself to the library staff (if the community has a library) and other public officials (Ark et. al, 2020, p. 24)"	
Explore local museums, civic centers, fire station, etc.	
Form partnerships with local government agencies, public library, nonprofits, businesses, and parks	
Honor "neighborhood residents by celebrating their legacies with an exhibition of photos and stories (Ark et. al, 2020, p.26)"	
Invite guest speakers	
Investigate/research local issues	
Build a community/classroom map	
"Survey your parent body for challenges worth addressing" (Ark et. al, 2020, p.33)	

For educators wanting to implement place-based education, you may find yourself reflecting on your own places. Although much of what I have written about PBE may seem like the main goal is to keep children in their current places, that is not the case. PBE is a teaching method that can teach our students how to become contributing citizens and change agents for their current place and provide them with the tools to navigate new places while continuing to contribute and be an agent of change. PBE is a teaching method that can help students and their places thrive as the world changes and brings more challenges.



## REFERENCE

- Office of the Governor. (n.d.). About the governor and first lady. <https://governor.wv.gov/about/Pages/default.aspx>
- Andrews, E. (2016, August 25). *The Battle of Blair Mountain*. History Channel. <https://www.history.com/news/americas-largest-labor-uprising-the-battle-of-blair-mountain>
- Ark, V. T., Liebttag, E., & McClennen, N. (2020). *The power of place: Authentic learning through place-based education*. Hawker Brownlow Education.
- Bass, E. L. (2019). Dialoguing with place: Using writing instruction to inquire into place. *The Virginia English Journal*, 69(1), 21–26.
- Bertling, J., & Rearden, K. (2018). Professional development on a sustainable shoestring: Propagating place-based art education in fertile soil. *Discourse and Communication for Sustainable Education*, 9(2), 5–20.
- Biviano, A. (2019). "I just ain't buyin it": Integrating place-based education into a rural high school. *The Virginia English Journal*, 69(1), 27–35.
- Deringer, S. A. (2017). Mindful place-based education: Mapping the literature. *Journal of Experiential Education*, 40(4), 333–348.
- Eggleston, J. R. (2017, June). *History of West Virginia mineral industries - coal*. WVGES Geology. <https://www.wvgs.wvnet.edu/www/geology/geoldvco.htm>
- Gee, N. (n.d.). *Buffalo Creek Dam (West Virginia, 1972): Description & background*. ASDSO Lessons Learned. <https://damfailures.org/case-study/buffalo-creek-dam-west-virginia-1972/>
- Giardina, D. (1999). *Storming heaven: A novel*. Ballantine Pub. Group.
- Giardina, D. (1994). *The unquiet earth*. Ivy Books.
- Gruenewald, D. A., & Smith, G. A. (Ed.) (2010). *Place-based education in the global age: Local diversity*. Lawrence Erlbaum Associates.
- Independent Statistics and Analysis: U.S. Energy Information Administration. (2020, October 5). *West Virginia - State energy profile overview*. <https://www.eia.gov/state/?sid=WV>
- Lewis, S. (2021, April 15). *West Virginia is offering remote workers \$12,000 to move there*. CBS News. <https://www.cbsnews.com/news/west-virginia-incentive-remote-workers-12000-relocate/>
- Misiaszek, G. W. (2016). Ecopedagogy as an element of citizenship education: The dialectic of global/local spheres of citizenship and critical environmental pedagogies. *International Review of Education*, 62(5), 587–607.
- Mullins, N. (2021, November 24). *Friends of coal? Might want to read this*. Thoughts of a Coal Miner. <http://thoughtsofacoalminer.com/friend%20of%20coal>
- National Coal Heritage Area & Coal Heritage Trail. (n.d.). *Company towns*. [https://coalheritage.wv.gov/coal\\_history/Pages/Company-Towns.aspx](https://coalheritage.wv.gov/coal_history/Pages/Company-Towns.aspx)
- National Coal Heritage Area & Coal Heritage Trail. (n.d.). *Coal miners*. [https://coalheritage.wv.gov/coal\\_history/Pages/Coal-Miners](https://coalheritage.wv.gov/coal_history/Pages/Coal-Miners)
- Smith, G. (2016, December 24). *The past, present and future of place-based learning*. Getting Smart. <https://www.gettingsmart.com/2016/11/past-present-and-future-of-place-based-learning/>
- Smith, G. A., & Sobel, D. (2010). *Place- and community-based education in schools*. Routledge.