

**W.E.B. Du Bois and the Making of
Accordion Books, Data Portraits, and People Places**

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Abstract

This unit is titled *W.E.B Du Bois, and the Making of Accordion Books, Data Portraits, and People Places*. It aims to challenge middle school students with three focused areas of inquiries:

- 1) Who is W.E.B. Du Bois, and why does his book *The Philadelphia Negro* matter?
- 2) How can data visualization improve our understanding of self-identity, and public health concerns around where we live?
- 3) How to use art and creative placemaking to maximize the quality of “people places” in a neighborhood?

Throughout the unit, students will engage in the making of accordion books about Du Bois and the Old 7th Ward of Philadelphia, data portraits of themselves, and art proposals of people spaces to address a public health issue. The unit incorporates the teaching standards from 5th grade English Language Art Common Cores in Writing and Speaking (W.5.10 and SL.5.1.C), from K to 12th grade National Council of Teachers of Mathematics (NCTM) on Data Analysis, and from 5th grade Pennsylvania Social Studies on Geography and the Human Characteristics of Places and Regions (PA.7.1.6 and PA.7.3.6).

Keywords: W.E.B Du Bois, *The Philadelphia Negro*, 7th Ward, accordion books, data portraits, data visualization, social epidemiology, placemaking.

Unit Content

Rationale

How Does It Feel to Be the Problem?

I've been told again and again by skeptics that W.E.B. Du Bois' ideas of "double consciousness" and his race theory from his groundbreaking book *The Soul of Black Folks* (1903) is too complicated for young readers like my 5th grade students to understand. This assumption made me more determined to introduce Du Bois' works and all kinds of complicated ideas in my classroom. Suppression of progressive ideas has historically contributed to an institutional as well as an individual form of oppression of the non-dominant groups. Many of Du Bois' writings such as those in his book *The Philadelphia Negro* (1899), remain under-shared and under-valued. Hence, I stand by my position that Du Bois' works are even more relevant and formidable today as it was 100 years ago, and not only need to, but must be introduced to students at a young age.

From my own experiences, students as young as 5th and even 4th grade DO understand Du Bois' ideas of race. During the height of the media coverage of George Floyd's tragic death and the indefinite school shutdown due to the COVID-19 pandemic, teachers across the nation were forced to teach remotely. I remembered showing an animated video titled "How Does It Feel to Be a Problem?" through Zoom to my then-4th grade students.¹ The video was based on the article "Strivings of the Negro People" that Du Bois wrote for *The Atlantic* magazine in 1897. After the video viewing, my class had an honest and heartfelt discussion that validated many fears of my students who were Black, Brown, immigrants, and/or children of refugees. In particular, one Black male student explained why he didn't want to go outside his house: "There are people who don't know me... who hate me because I am Black."

This response shook me even now, and in retrospect, it reminded me of what Du Bois wrote about the passing of his firstborn (Burghardt Du Bois) due to diphtheria while living in Philadelphia: "Well sped, my boy, before the world had dubbed your ambition insolence, had held your ideals unattainable, and taught you to cringe and bow. Better far this nameless void that stops my life than a sea of sorrow for you."² Diphtheria is now a rare infectious disease in Philadelphia and the rest of the developed world; unfortunately, in 2021, children in Ethiopia (4,453 cases), India (1768), Indonesia (235), Pakistan (169), and Yemen (1516) are still subjected to its occurrences due to the availability of vaccination.³ To my fellow educators (convinced or dubious), I write this unit to encourage you to share Du Bois' contributions to your students, regardless of their age, and let them decide for themselves.

Instead of hushing students about their fears, teaching them to tolerate hatred, and stay away from difficult conversations, Du Bois advocated the teaching of self-reliance with the goal that: "the object of education is manhood and womanhood, clear reason, individual talent, and genius and the spirit of service and sacrifice, and not simply in a frantic effort to avoid change in the present institution."⁴ In his Niagara Movement Speech (1905), Du Bois gave this fair warning: "Either the United States will destroy ignorance or ignorance will destroy the United States."⁵ In

his autobiography *Darkwater* (1920), Du Bois included children in his Credo of beliefs and actions, and also dedicated a whole chapter titled “The Immortal Child” to address the training of children with “a knowledge of what the world is and what it knows and how it does its daily work”⁶ In his words of wisdom: “If a man die shall he live again? We do not know. But this we do know, that our children's children live forever and grow and develop toward perfection as they are trained. All human problems, then, center in the Immortal Child and his education is the problem of problems.”⁷

A Different Question: How Does It Feel to Be the Solution?

I want my curriculum unit to focus on getting students to imagine creative, hands-on and easy-to-do solutions to improve the health of their community. My unit includes lessons and activities that I hope would empower students of all races to take civic actions, see themselves as agents of change, and trust their visions to solutions rather than “feeling” like they are the root causes of our societal problems and downfalls. My unit asks students a different question: “How does it feel to be the **solution**?” and guide them to imagine themselves as practicing social epidemiologists like Du Bois was.

In *The Soul of Black Folks*, Du Bois reflected on how capitalism affect the White population differently than the Black population. He wrote: “To be a poor man is hard, but to be a poor race in a land of dollars is the very bottom of hardships.”⁸ These hardships created by poverty determine the state of a person’s health, while wealthy people are more likely to live a longer, healthier, and disability-free lives. According to a *Health Affair* article (2018), families with annual income less than \$35,000 are 4 times more likely to feel nervous and 5 times more likely to feel sad most or all the times, than families with annual income more than \$100,000.⁹ Research continues to show how economic inequity is linked to health disparities; these disparities occur early in a person’s life and are often passed on across generations resulting in poor nutrition, chronic illness and language development. Some specific topics of these disabilities include: 1) Smoking causes lung cancer, but social networks and exposure to outdoor advertising can influence how much a person smokes; tobacco companies target poorer neighborhoods. 2) Obesity is not simply a matter of genetics, self-control and eating habits, but also depends a great deal on food availability, the price of fruits and vegetables, and the absence of a walkable neighborhood. Poverty, social ties, and modern racial segregation shape the public health of our populations where the wealthier are healthier, and the poorer are more likely to be sick with asthma, malnutrition, hypertension, cancer, alcoholism, and depression.¹⁰

Introduction of the Unit

My curriculum unit is consisted of three groups of lessons-activities that align with standards in writing, speaking & listening, math, and social studies. The three focused areas of inquiries are:

- 1) Who is W.E.B. Du Bois, and why does his book *The Philadelphia Negro* matter?
- 2) How can data visualization improve our understanding of self-identity, and public health concerns around where we live?
- 3) How to use art and creative placemaking to maximize the quality of “people places” in a neighborhood?

The first series of lessons-activities will introduce students to the long and remarkable life and work of W.E.B. Du Bois (1868-1963). Each student will make a Du Bois accordion book on the first day. Afterward, students will complete assignments such as: decorate the book cover of Du Bois' profile with descriptive words, design a Du Bois hoodie, read Du Bois' list of favorite things and write your favorites, listen to Du Bois speak as you read along the transcription. An example of an accordion book can be made from 5 pieces of copy paper, each paper folded in halves and then tape to make a scroll, and the final book will have 20 pages (counting both sides of the paper including the front and back covers). Additional pages can easily be added if needed. See **Teaching Strategies** for more information and tutorial videos.

The second series of activities will have students study Du Bois' work on the Old 7th Ward from his book *The Philadelphia Negro*, and along with Du Bois' infographics from "The Exhibit of American Negroes" in Paris. Students will glue or draw maps, make data portraits, write survey questions and reflections on their accordion books.

The third series of activities will have students conduct surveys of their school community to support or debunk a claim related to social epidemiology (race, wealth, health issues). Examples of claims include: "wealth" defines how healthy you can be, "race" defines your occupation and what grades you will get, "race" has little impact on your earning potential or level of education achievements, poor people can be as healthy as rich people because money can't buy you happiness. Based on these surveys, the data collected, and walking tours of their neighborhood, students will design an art proposal to improve a public health issue by maximizing the quality of people places such as the sidewalks, the school fences, a community garden, or a park.

My curriculum unit was created under the expertise guidance and support of Dr. Amy Hillier, Associate Professor in the School of Social Policy & Practice (SP2) at the University of Pennsylvania who led the teacher seminar titled *W.E.B. Du Bois and Philadelphia's Seventh Ward* sponsored by the Teachers Institute of Philadelphia (TIP). My participation in this TIP seminar has challenged me to write this unit. Since 2006, Professor Hillier has co-directed with Stephanie Boddie, Professor of Church and Community Ministries at Baylor University on a project called *The Ward* (visit www.dubois-theward.org).¹¹ This project is dedicated to share "the timeless lessons about racism and the role of research" from Du Bois' 1899 book, *The Philadelphia Negro*. Using Geographic Information System (GIS) technology and archival data, the team recreated the survey Du Bois conducted, provides resources like a 19-minute documentary *A Legacy of Courage: W.E.B. Du Bois and The Philadelphia Negro*,¹² designed an interactive board game as part of a five-day-high-school curriculum that was developed with students from the University of Pennsylvania, Haverford College, and local high schools. The intent of the board game is to give players the experience of being a Black resident of the Old 7th Ward in order to better understand the barriers that race and class created to accessing healthcare, education, housing, and employment. In 2008, a mural on the historically African American Engine 11 located on 6th and South Streets was completed to honor Du Bois's work; the mural depicts two images of Du Bois: one sitting at his desk, and another standing among the old and new residents of the 7th Ward.¹³ Dr. Hillier's works also include the topic of mortgage redlining in 1930-1950 Philadelphia, and using the youth participatory action research (YPAR) model to employ youth leadership, especially for the lives of LGBT youth.¹⁴

My School Demographic

Currently, I teach 5th grade at the Francis Scott Key School in the City of Philadelphia. The school serves students from K to 6th grades. My school demographics include a highly diverse community with a wide range of cultural and language backgrounds. The languages spoken by this diverse group of multilingual students, teachers, administrators, and parents include: Arabic, Burmese, Chinese, French, Hindi (India), Indonesian, Italian, Karen (Myanmar and Thailand), Khmer (Cambodia), Korean, Laos, Malays, Chichewa (Malawi), Nahuatl (Aztec/Mexica), Nepali, Pashto (Afghanistan and Pakistan), Poqomchi (Guatemala), Q'eqchi'(Central America), Spanish, Swahili, Thai, Turkish, Vietnamese, and other Indigenous languages.

In 2020-2021, we have an enrollment of 419 students: 41% Hispanic, 38% Asian, 10% White, 8% Black, and 3% Multi-Racial; the student population is made up of 43% female students and 57% male students.¹⁵ About 67% is ELL, 5% had exited out of ELL services, and 15% are children of immigrants who are American-born (these students are NOT classified to receive English Language Learners (ELL) services, even though a language other than English is primarily spoken at home).¹⁶ That's an estimate of 85% of the student body is recent immigrants and/or children of immigrants. Based on the 2022 Pennsylvania state test, only 5% of students are either advanced or proficient in math, and only 12% in reading.¹⁷ According to Niche.com, the median household income is \$68,314, median rent is \$1,385, and median home value is \$233,155 for the neighborhood of my school.¹⁸

Content Objective

Biography of William Edward Burghardt (W.E.B.) Du Bois

Who is W.E.B. Du Bois? Who is NOT Du Bois? In May 2023, when I showed my students a photo of Du Bois with his top hat, none of my 5th grade students know who he was. The only name I got was: Dr. Martin Luther King. From this, I am made aware that it is as important to talk about who Du Bois as well as who he is not.

Du Bois resists simple and easy classification. During his long life of 95 years, Du Bois was a civil rights pioneer, historian, sociologist, educator, editor, writer, and an outspoken public intellectual. Du Bois was born on February 23, 1868, in a small town in Great Barrington, Massachusetts and died on August 27, 1963, as a new citizen of Ghana, Africa.¹⁹ Du Bois' father was a barber and itinerant laborer born in Haiti descended from a mixed race Bahamian slaves and his mother was a domestic worker descended from a freeman of Dutch slave origin.²⁰ Du Bois's father left the family when Du Bois was two, and his mother died when Du Bois was 16 leaving him penniless.²¹ Du Bois was the first African American to graduate from his integrated high school, he went on to attend Fisk University in Nashville, TN for three year, and in 1895, he became the first African American to earn a PhD from Harvard University.²² From 1896 to 1897, Du Bois was in Philadelphia doing research of the 7th Ward; his then-wife Nina Gomer (one of his former students when he was a young professor at Wilberforce College, Ohio) accompanied him.²³ Later Nina Gomer moved back to Great Barrington, Massachusetts to wait the birth of their son while Du Bois remained in Philadelphia. On October 2, 1897, the couple's son

Burghardt was born; shortly the same year, the family moved to Atlanta, Georgia.²⁴ In 1899, Du Bois' son Burghardt died of diphtheria at the age of two, and a year later, the couple's second child, Nina Yolande Du Bois was born (also in Great Barrington) on October 21, 1900.²⁵

Du Bois taught in the Atlanta University in two separate times that totaled to almost 25 years of teaching. In 1897, the university President Horace Bumstead brought Du Bois to Atlanta to establish a sociology program and Du Bois taught there until 1910.²⁶ Then Du Bois co-founded the NAACP in 1910, and served as the director of publicity; he also started the publication of the organization's official journal *The Crisis*, and became its editor until 1934.²⁷ Du Bois also published a special issue called "The Children's Number," aimed at educating and raising the racial consciousness of children. In January 1920, Du Bois founded and published the first magazine for African-American children and youth called *The Brownies' Book*.²⁸ The introduction to the 1st issue reads: "It aims to be a thing of Joy and Beauty, dealing in Happiness, Laughter and Emulation, and designed especially for Kiddies from Six to Sixteen. It will seek to teach Universal Love and Brotherhood for all little folk - black and brown and yellow and white. Of course, pictures, stories, letters from little ones, games and oh - everything."²⁹ Due to financial problems, *The Brownies' Book* was discontinued after just two short years. In 1934 Atlanta University President John Hope invited Du Bois back to chair the university's sociology department, and during the next 10 years, Du Bois published a lot, including his seminal book *Black Reconstruction* (1935).³⁰ In 1944 (now 76 years old), Du Bois resigned from his teaching position and returned to New York as the director of special research at the NAACP.³¹

After his 1949 visits to see the ruins of the Warsaw ghettos in Poland, Du Bois was confronted with how the Nazi government targeted Jews as the problem. He expanded his original definition of the color line and wrote: "No, the race problem in which I was interested cut across lines of color and physique and belief and status and was a matter of cultural patterns, perverted teaching and human hate and prejudice, which reached all sorts of people and caused endless evil to all men."³² Here, Du Bois acknowledged that the "problem of the color-line" goes beyond the color discrimination of simply Black versus White.

In 1951, Du Bois turned 83 years old, gave a big party to raise funds for the decolonization of Africa, married his 2nd wife (Shirley Graham in the wedding of the year), was arrested because he was circulating a petition protesting nuclear weapons, and later arraigned in federal court for being a secret agent of Soviet Union.³³ From February 1952 to 1958 both Du Bois and Graham were denied passports to travel abroad, mainly due to their socialist and communist affiliations.³⁴ During the 1956 presidential election between Dwight Eisenhower and Adlai Stevenson, Du Bois said that he would not vote for either candidates, and it turned out that he could not vote for Darlington Hoopes, the Socialist Party, due to the lack of third party ballot-access.³⁵

At the age of 93, Du Bois moved to Ghana, Africa to manage an ambitious project to create an encyclopedia on African diaspora, and soon acquired citizenship of that country.³⁶ On the eve of the March on Washington in D.C. (August 27, 1963), Du Bois died at the age of 95 in Accra, Ghana, and two days later his body was interred in a state funeral outside Castle Osu, formerly a holding pen for the slave ships bound for America.³⁷ Du Bois lived a long life with political evolution, changing ideals, and a place in the global stage.

Old 7th Ward and The Philadelphia Negro (published 1899)

Imagine Du Bois with his top hat and coattails looking out of place, walking door-to-door interviewed Black residents in an impoverished neighborhood about their employment, education, health, family life, and household arrangement. Du Bois was collecting information that White census takers would not do, and could not do as well as he had done. In the 19th century, the 7th Ward was considered to be a notorious "slum," populated by a mix of Jewish and Italian immigrants and Blacks, and best-known for its taverns, brothels, loud music, and crimes.³⁸ Du Bois wrote this about the 7th Ward: "We lived there a year, in the midst of an atmosphere of dirt, drunkenness, poverty and crime. Murder sat at our doorsteps, police was our government and philanthropy dropped in with periodic advice."³⁹ But he also added how he felt somewhat safe as well as you don't ask too many questions: "On its face this slum is noisy and dissipated, but not brutal... the stranger can usually walk about here day and night with little fear of being molested, if he be not too inquisitive."⁴⁰

From 1896 through 1897, Du Bois with his bride of 3 months, resided at 617 Carver Street (now Rodman Street), a branch of College Settlement House of the University of Pennsylvania while researching for his classic study, *The Philadelphia Negro*.⁴¹ Du Bois was poorly treated financially, given little support and guidance from the university. He soon understood that the invite was instigated by the disguise of political reform. Du Bois wrote:

"I was offered a salary of \$800 for a limited period of one year. I was given no real academic standing, no office at the University, no official recognition of any kind; my name was even eventually omitted from the catalogue; I had no contact with students, and very little with members of the faculty, even in my department."⁴²

At the turn of the 19th century, more African Americans of all classes and occupations lived in the 7th Ward than anywhere else in the city. The Old 7th Ward had roughly 9,700 residents, Du Bois conducted nearly 835 hours of door-to-door interviews with 2,500 households.⁴³ Despite Du Bois' somewhat judgmental and elite attitudes, the study was groundbreaking in both its scientific methodology and its data findings, and his book created a rich and fair narrative of the 19th-century Philadelphia's African American community.⁴⁴ The book has categorized the households by different attributes, and created color-coded maps to display the various classifications. One of these classifications can be found between pages 60 and 61 of Chapter V. (The Size, Age, and Sex of the Negro Population) in a map folded like an accordion book with the title "The Seventh Ward of Philadelphia: The Distribution of Negro Inhabitants Throughout the Ward, and their social condition." Each map has a legend with colored keys indicating the status of each house: white (or not colored) for Residences of Whites Stores, Public Buildings, etc.; black color for Grade 4 - Vicious and Criminal Class; light-blue color for Grade 3. The Poor; dark green color for Grade 2. Working People – Fair to Comfortable; and red color for Grade 1. "The Middle Classes" and those above.⁴⁵ The 7th Ward was bounded by Spruce Street on the north, South Street on the south, Seventh Street on the east, and Twenty-Third Street on the west. This color map is available at the following websites:

<http://stillfamily.library.temple.edu/exhibits/show/william-still/maps/w-e-b--du-bois-seventh-ward-ma>, a webpage of the Temple University Libraries.

<https://collections.leventhalmap.org/search/commonwealth:gb19h9947>, a webpage of Norman B. Leventhal Map & Education Center at the Boston Public Library

<https://storymaps.arcgis.com/stories/01879ebec3e74cf186d07ce1aeacbcf5>, a webpage of the Baylor University.

Du Bois introduced the concept of the color line in *The Philadelphia Negro* to describe the social interactions between the Black and White inhabitants of Philadelphia. He wrote: “In all walks of life the Negro is liable to meet some objection to his presence or some discourteous treatment; and the ties of friendship or memory seldom are strong enough to hold across the color line”⁴⁶ In 1903, Du Bois prophetically wrote the famous sentence that is rarely quoted completely in his book *The Soul of Black Folks*: “The problem of the twentieth century is the problem of the color line — the relation of the darker to the lighter races of men in Asia and Africa, in America and the islands of the sea.”⁴⁷ To Du Bois, the color line is “the question of how far differences of race... will hereafter be made the basis of denying to over half the world the right of sharing to their utmost ability the opportunities and privileges of modern civilization.”⁴⁸

Data Visualization and “The Exhibit of American Negroes” in Paris (1899)

Data can influence us to make good or bad decisions about our daily lives, our health, politics, economic, and education. By studying the data visualization and infographics from *The Exhibit of American Negroes in Paris (1899)*, students can explore some of the biases and theories about data collection that students may benefit knowing. Here is a 3-minute video about the significance of the exhibit. <https://www.youtube.com/watch?v=iLkjtXqQEI0>.

In 1900 from April to November, for about 8 months, over 50 million visitors may have at least of glimpse of an exhibit called “The Exhibit of American Negroes” at the World’s Fair in Paris, curated through the support of Du Bois, Thomas Calloway, and Daniel Murray of the Library of Congress.⁴⁹ Surprisingly or not, Booker T. Washington personally appealed to the then-U.S. President William McKinley and 4 months before the Paris Exposition, the U.S. government allocated \$15,000 for the exhibit.⁵⁰ Calloway (a former classmate of Du Bois) invited Du Bois to oversee the exhibit. Du Bois was teaching sociology at Atlanta University at that time; in a short period of four months, he and his curatorial team put together a multimedia presentation that testified to the strength and resilience of Black lives in the United States. Du Bois and his team conceived the exhibit as a sort of cabinet of curiosities, full of juxtapositions and visual echoes. The audience was encouraged to wander and drift, study at whatever caught their eye; there were a small statue of Frederick Douglass; a bibliography of African-American writings (14,000 titles); 4 volumes of more than 350 patents by African-American inventors, a photo of a sewing class at Howard University, snapshots of homes of Black teachers decorated with pride, countless deliberately ordinary photos of baseball teams, soldiers, farmers, scientists, shopkeepers in their everyday lives.⁵¹ Each item from this exhibit contributed to the message that African-Americans are more than capable, gifted, and successful in what they do in the midst of racial injustice and color discrimination.

The exhibits at that time treated Black people like zoo animals and circus performers, i.e. a spectacle for public entertainment. For instance, a theatrical production titled *Black America* (1895) staged 500 Black workers (men, women and children) living in cabins reenacting slavery in a cotton plantation during a hot summer in a Brooklyn Park.⁵²

The most groundbreaking visuals in the exhibition were handmade charts and infographics that illustrated the changes of black life since emancipation, with data about population growth, educational attainment, occupations and income levels. The color schemes (predominantly red, green, yellow, brown, and black) are eye-catching and playful and often there is a large amount of open space for viewers, as if it is a challenge to the audience to imagine what content is missing. One chart titled “City and Rural Population 1890” looks like more like a coiled snake than population statistics of Georgia with a green line depicting has a line depicting the 78,109 Negroes in cities of over 10,000 inhabitants, then zigzag into a short gray line depicting 8025 Negroes in cities from 5000 to 10,000 [inhabitants], continues with a yellow line depicting 37,699 Negroes in cities from 2,500 to 5,000 [inhabitants, and finally spiral into a red line depicting 784,952 Negroes living in the country and villages.⁵³ Here data is more like a narrative telling a story than just static facts and numbers. Another data portrait showed the Income and Expenditure of 150 Negro Families with striking contemporary visuals in complex juxtaposition of mixed media: inked typography, gouache-colored bars, photo prints of a well-dressed mother and her son under the subtitle “Clothes,” and even a gold seal of a one dollar coin to represent “Annual Income.”⁵⁴ Du Bois described the materials that he had selected as “an honest straightforward exhibit of a small nation of people, picturing their life and development without apology or gloss, and above all made by themselves.”⁵⁵ He added, “In a way, this marks an era in the history of the Negroes of America.”⁵⁶ The exhibition won awards in Paris, and then it travelled home and toured the United States.

Under-explored and under-respected by the academia for almost a century due to the “seemingly absurd” aspects of the exhibit. Not many people pay attention to it, and it didn’t have many influences immediately after. A century later, Du Bois’ charts and graphics are returning to the public consciousness in part due to social media and advanced technology. As the design scholar Jason Forrest had argued in his essays, one of the reasons for the enduring appeal of these infographics is the viewer’s surprise that they look so contemporary yet precise like an abstract painting by a master artist like Kazimir Malevich, Piet Mondrian, or Frank Stella.⁵⁷

Social Epidemiology and the Impacts of Wealth on Health

What is “Peoples’ Social Epi?” Du Bois and his work in *The Philadelphia Negro* have just recently become more valued in the social science field. A new discipline called “social epidemiology” has grown partly due to Du Bois’ pioneer work. According to Dr. Aldon D. Morris, a professor of sociology at Northwestern University, the denial of Du Bois’ groundbreaking work in sociology has been “systematically ignored for decades” because in a larger context, this work is a major attack on the injustice, inequality, and racism inflicted on the Black people by the dominated majority.⁵⁸ Peoples’ social epi addresses how the harsh impacts of racism and other social injustice greatly contribute negatively to a person’s well-being physically, emotionally, and mentally. Generally, epidemiology that is non-participatory in nature, limits the role of people to study participants, and is primarily concerned with science that make generalizations, but not necessarily locally practicable or actionable. Also, anti-

intellectualism is a popular mindset persuasive in the U.S. and one of its by-products is to keep people clinging to their beliefs without the backing of science, data, and other evidences.

Teaching Strategies

Accordion Books and Writing for Learning

The first lesson of this unit is teaching students how to make a Du Bois' accordion books that they can keep adding more pages when needed. This accordion book will be used for the entire unit (addressing Writing and Social Studies Standards), students will use the accordion books for writing assignments, journaling, personal reflection, poetry, note-taking, drawings, collecting maps and other data. Accordion books serve both non-linear and dynamic ways of thinking and connections. There are many different ways to make an accordion book.

Here is a list of tutorials for accordion books

<https://www.youtube.com/watch?v=WNGAUDygwsY> (5:14 minutes)

<https://www.youtube.com/watch?v=N6W7-IF32RY&t=194s> (6:33 minutes)

Easy to made Mini-books or Zines:

<https://www.youtube.com/watch?v=21qi9ZcQVto> (1:11 minutes)

<https://www.youtube.com/watch?v=iwspEWt9HIo> (9:34 minutes)

More complex accordion and pop-up books

<https://www.youtube.com/watch?v=ZcOGptwj8p0> (4:38 minutes)

<https://www.youtube.com/watch?v=QCBDQz7U2kg> (28:35 minutes)

https://www.youtube.com/watch?v=RZR_b753ZJ0 (6:13 minutes)

Data Portraits and Personal Stories Collection

In a TED Talk titled “How We Can Find Ourselves in Data,” Giorgia Lupic (founder and design director at Accurat, a New York City- and Milan-based firm) explains a term she calls “data humanism.”⁵⁹ The concept is to use data to reclaim and document personal information, turning statistics into a subjective narrative with colors and vitality. Lupic explains: “It’s time... to begin designing ways to connect numbers to what they really stand for: knowledge, behaviors, people.”⁶⁰ A data portrait is like a selfie (no right or wrong right way to do it), but it is made out of data points rather than recognized human features like a traditional portrait.

For the 2nd series of lessons (addressing Math and Social Studies Standards), students will make their personal data portraits/selfie. I have designed a data portrait assignment with the following direction with 8 simple tasks for students to complete. A blank worksheet is created in a 3 x 3 grid for teachers to use. I’ve also fabricated 6 examples of completed data portraits to make it clear to students who the end results may look. Possible “Notice and Wonder” questions: The

number 6 appeared most often because we live in the USA. Why do some data portraits have both a black moon and a yellow sun?

Direction: In the middle of the page, create your own data portrait by completing tasks 1 to 8. Ben Shneiderman, a prominent computer scientist explains: “The purpose of [data] visualization is insight, not pictures.”⁶¹ In other words, the purpose of this activity is less about drawing well, and more about how we interpret the visuals we made together. Optional: 1) Use a white or colored post-it for each data portrait instead of this worksheet. 2) Post all the data portraits from students on a chart paper, and discuss what they notice and wonder.

Task 1: At the center of your data portrait, draw your favorite shape. Ex: a circle, triangle, square, rectangle, star, etc. Color the inside of your shape: BLUE for introvert, RED for extrovert, PURPLE for both, No color if undecided.

Task 2: Across your favorite shape, draw a line that is one millimeter wide. If you think the world is: Half full: draw a GREEN line. Half empty: draw a YELLOW line. Undecided: draw a BLACK line.

Task 3: On top of your (one mm thick) line, write the initial in upper case to indicate “What is your virtue?” Ex: G for grit, K for kind, C for courageous, H for honesty, T for trustworthy.

Task 4: Near the upper left corner of your portrait: Draw a black moon, if you are a night person. Draw a yellow sun, if you are a morning person.

Task 5: Near the upper right corner of your portrait, indicate “Where are you from?” Write the number(s): 1 for Africa, 2 for Antarctica, 3 for Asia, 4 for Australia, 5 for Europe, 6 for North America (USA), 7 for South America.

Task 6: In the bottom left corner of your portrait, indicate “How old are you?” by drawing lines and/or dots. One line = 10 years. One dot = 1 year

Task 7: At the middle of the bottom side of your portrait, draw an emoji or symbol of your talent(s) and interest(s). Ex: music notes, paint brushes, gaming controller (PS4), a book for reading, a running stick figure, a soccer ball, etc. [Research emojis on your phone or internet, OR create your own symbols.]

Task 8: In the bottom right corner of your portrait, indicate “What is your favorite pet?”

* for cat, # for dog, ! for fish, + for other, ^ for no favorite.

Listed below are two other sets of instruction to make different types of data portrait/selfie:

<https://ideas.ted.com/how-to-draw-your-own-selfie-using-your-personal-data/>

<https://futuraice.com/blog/data-portrait-postcards>

Student's Name: _____ Date: _____

Direction: In the middle of this page, create your own **data portrait** by completing tasks 1 to 8. Ben Shneiderman, a prominent computer scientist explains: *"The purpose of [data] visualization is insight, not pictures."* In other words, the purpose of this activity is less about drawing well, and more about how we interpret the visuals we made together. **Optional:** 1) Use a white or colored post-it for each data portrait instead of this worksheet. 2) Post all the data portraits from students on a chart paper, and discuss what they notice and wonder.

<p>1. At the center of your data portrait, draw your favorite shape. Ex: a circle, triangle, square, rectangle, star, etc.</p> <p>Color the inside of your shape: BLUE for introvert, RED for extrovert, PURPLE for both, No color if undecided.</p>	<p>2. Across your shape, draw a line that is one millimeter thick.</p> <p>If you think the world is: Half full: draw a GREEN Line Half empty: draw a YELLOW line Undecided: draw a BLACK line</p>	<p>3. On top of your (one millimeter thick) line, write the initial in upper case to indicate "What is your virtue?" Ex: G for grit, K for kind, C for courageous, H for honesty, T for trustworthy</p>
<p>4. Near the upper left corner of your portrait:</p> <p>Draw a black moon, if you are night person.</p> <p>Draw a yellow sun, if you are a morning person.</p>	<p>Create your data portrait here in this block:</p>	<p>5. Near the upper right corner of your portrait, indicate "Where are you from?"</p> <p>Write the number(s) 1 for Africa, 2 for Antarctica, 3 for Asia 4 for Australia, 5 for Europe, 6 for North America (USA), 7 for South America.</p>
<p>6. At the bottom left corner of your portrait, indicate "How old are you?" by drawing lines and/or dots</p> <p>One line = 10 years One dot = 1 year</p>	<p>7. At the middle of bottom side of your portrait, draw an emoji or symbol of your talent(s) and interest(s). Ex: music notes, paint brushes, gaming controller (PS4), a book for reading, a running stick figure, a soccer ball, etc. [Research emojis on your phone or internet, OR create your own symbols.]</p>	<p>8. At the bottom right corner of your portrait, indicate "What is your favorite pet?"</p> <p>* for cat, # for dog, ! for fish, + for other ^ for no favorite</p>



Survey Questions, Walking Tour, and Mapping,

Teach students to write the 6 main types of survey questions: open-ended, closed-ended, nominal, (5-point)Likert scale, rating scale, and “Yes or No” questions. For more detailed explanations, visit: <https://www.userreport.com/blog/6-different-types-of-survey-questions-you-should-use/>

Art Creative Placemaking, and People Places

For the 3rd series of lessons, students will design a public space to address a community health need based on data collected. I would recommend to students to “Think in the smallest scale” for their proposal for their project. Creative Placemaking can run the gamut from placing trash cans on sidewalks to drawing with chalk on the sidewalks to making a community mural to building a park where the community can convene. A common thread that runs through all these Creative Placemaking projects is the goal: building stronger communities to enjoy shared spaces. Think of it as a hands-on approach to use art and collective vision for improving a neighborhood, city, or a region, in order to maximize the shared value of public spaces. Encourage students to collectively reimagine and reinvent public spaces as the heart of their community.

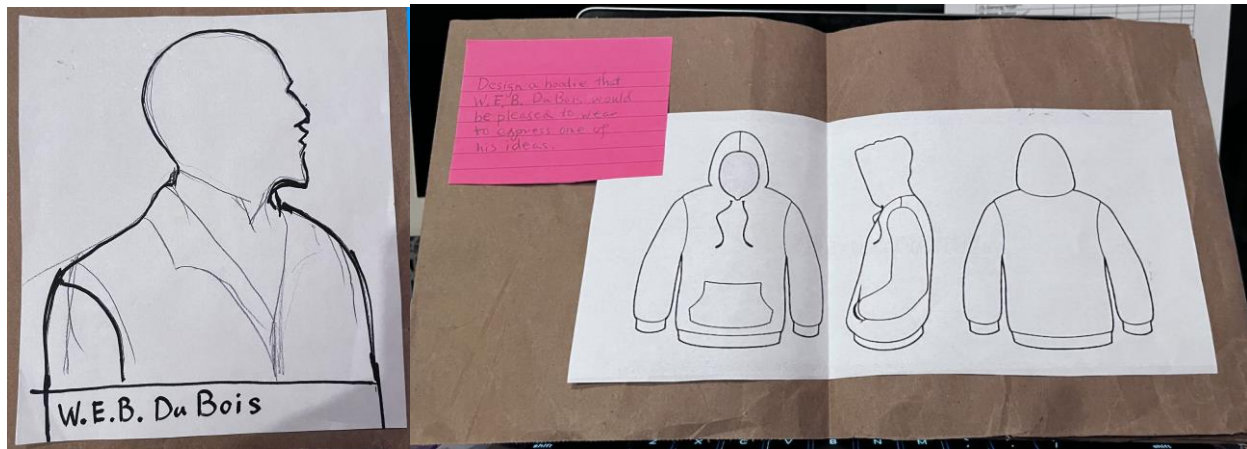
Ask students: What is the heart of your neighborhood? In medieval times, the town square or piazza gather people together to meet for a variety of reasons: buy food, collect water, celebrate an event, hear the latest news, talk politics, even watch an execution, or just sit and watch people.⁶² The COVID-19 pandemic has triggered a resurgence of people gathering in open spaces. In the city of Philadelphia, an increasing number of restaurants and cafés are extending their dining areas by setting up tables and chairs on the walking pavement like the Parisian-style cafés which are the center of social life in Paris. People Places can bring life to the public realm, and serve as epicenters for relaxation, play, conversation, networking, news-gathering or just a healthy way to get a breadth of fresh air. These spaces don’t have to be only for the hipsters, but can also serve the elderly, children, the disables, college students, and hospital patients. The rise of mall culture in the 90s is slowly fading. According to *Statistica*, the vacancy rate of malls and similar shopping structures reached over six percent and over 5,000 stores were closed by bankrupt mall-based retailers in 2020 alone.⁶³

If you decide to take your students for a walking tour, try your best to find destinations that have good foot traffic; this way students can observe human activities and figure out what would be a good solution to improve shared spaces that are good for public health.

Classroom Activities

First Series of Lessons (Writing and Speaking Standards):

Activity 1: Making Du Bois’ Accordion Books. Choose a size of the book to serve your need. Have students watch a tutorial video on how to make an accordion book. Tell students that they will use the book to learn more about Du Bois, his book *The Philadelphia Negro*, the 7th Ward, data portrait, and creative placing. Materials: copy papers (or a roll of brown butcher paper), rulers, scissors, glue sticks, tapes, colorful scrape papers, color pencils, markers, etc. The images below can be enlarged to use as the book cover and the hoodie design activity.



Activity 2: Introduction: W.E.B. Du Bois Is and Is Not? On a chart paper, write “Who is Du Bois?” On another chart paper, write “Who Du Bois is NOT? Ask students these two questions. Even if students are not familiar with his name, just jot down adjectives of they think he is important. Teachers can also activate prior knowledge with a photo of Du Bois. Two well-known photos are: Du Bois sitting at his desk. Du Bois standing at a doorway with his top hat. This link has both photos. <https://penntoday.upenn.edu/news/times-and-life-web-du-bois-penn>

Activity #3: Play this video about Du Bois and have students take notes in their accordion books. <https://www.youtube.com/watch?v=qaBdgEp8EEg&t=44s> 5:22 minutes

Activity #4: Play the audio recording of Du Bois speaking. Teachers may want to provide the transcript on the Smart Board or on paper. Du Bois: a Recorded Autobiography (Excerpt with Transcript) <https://www.loc.gov/exhibits/civil-rights-act/multimedia/w-e-b-du-bois.html> 3 min.

Additional videos and recordings:

Full Recording (1961) <https://www.youtube.com/watch?v=Ooa-CzT7NWg> > 1 hour

Du Bois Visits China, 1959 <https://credo.library.umass.edu/view/full/mums312-b246-i002> 8:33

Du Bois and Ghana, <https://www.youtube.com/watch?v=sNkeOZ8JDSk> 8:00 min.

Activity #5: Have students design a hoodie for a contemporary Du Bois. This website has many types of hoodie templates to choose from. <https://templatelab.com/hoodie-templates/>

Activity #6: Close-read this newspaper article *The Negro and the Warsaw Ghetto* by Du Bois, May 1952. Have students render the text by writing down one word, one phrase, and one quote that resonates with them from the article. Have students read out their one word, then phrase, and then one quote with the whole group. Discuss reasons for their choices.

<https://perspectives.ushmm.org/item/w-e-b-du-bois-the-negro-and-the-warsaw-ghetto/collection/black-americans-and-world-war-ii>

Activity #7: Have students complete the worksheet about Du Bois' favorite things.

See worksheet below. **Closing Activity for the 1st Series:** Ask and discuss "Why is Du Bois so important? What are his top three major contributions?" Have students write a paragraph or jot down phrases for each question in their accordion books. See Du. Bois' letter of his favorite things at this link <https://credo.library.umass.edu/view/full/mums312-b085-i449>

Student's Name: _____ Date: _____

Direction: In a letter dated June 2, 1938, Du Bois responded to an inquiry from Cyril Clemins at the International Mark Twin Society, Missouri with a list of his favorite things. Read carefully Du Bois' responses to each sentence starter, and then write your own answers. For item #20, come up with a sentence starter of your own, predict what Du Bois' response would be, and then write your own response. **Source:** <https://credo.library.umass.edu/view/full/mums312-b085-i449>

	Sentence Starters	Du Bois' Answers	Your Answers
1	My best virtue -	grit	
2	Must worst fault -	sensitiveness	
3	My favorite actress -	[Sarah] Bernhardt	
4	My favorite actor -	Richard Harrison	
5	My chief hobby -	walking	
6	My favorite song -	<i>Go Down Moses</i>	
7	My favorite book (by myself)	<i>SOULS OF BLACK FOLK</i>	
8	My favorite book (by another)	<i>Three Musketeers</i>	
9	My pet vanity -	a beard	
10	Usual time of rising and retiring:	6 a.m. and 10 p.m.	
11	My favorite food -	bread and milk	
12	My favorite drink -	ginger ale	
13	My favorite sport (outdoor)	walking	
14	My favorite sport (indoor) -	Reading	
15	My favorite character in history -	Toussaint L'Ouverture	
16	My favorite animal -	the dog	
17	My very earliest memory -	Tongs and the fire place	
18	My favorite study in school -	History	
19	My favorite study (outside my native land) -	Sociology	
20	[Write one of your own] _____ _____	[Predict Du Bois' answer] _____ _____	

Second Series of Lessons (Math standards on data analysis)

Activity #1: Watch one of these videos about the Old 7th Ward of Philadelphia
<https://www.youtube.com/watch?v=u2fR5AnIckA> 2:54 minutes

https://www.youtube.com/watch?v=P6_EM_W0CN4 5:08 minutes

Activity #2: Study, analyze and draw DuBois' (accordion-folded) map from *The Philadelphia Negro*. Use the map from this webpage of the Temple University Libraries:
<http://stillfamily.library.temple.edu/exhibits/show/william-still/maps/w-e-b--du-bois-seventh-ward-ma> **Optional:** Print out part or all of the sections of the map and have students glue them on their accordion books.

Activity #3: Watch one of the videos below and discuss different types of data visualization.

https://www.youtube.com/watch?v=MKP_N9Ipm7Y 1:30 minutes (Basic)

<https://www.youtube.com/watch?v=csXmVBw8cdo> 7:30 minutes (Advanced)

Activity #4: Close Read the New Yorker's article from link below. Discuss the readability of the following infographics of Du Bois' work for "The Exhibit of American Negroes:

1) Income and Expenditure of 150 Negro Families in Atlanta, GA, U.S.A.; 2) City and Rural Population. 1890. (Du Bois spiral); 3) Land Owned by Negroes in Georgina, U.S.A. 1870-1900.

<https://www.newyorker.com/books/page-turner/what-web-du-bois-conveyed-in-his-captivating-infographics>

Activity #5: Make a data portrait using the worksheet (*See Teaching Strategies, Data Portrait and Personal Stories Collection*). As a class, analyze all the completed data portraits by compare and contrast. Organize the data portraits into categories based on commonalities.

Activity #6: Make and post a list of social issues in the neighborhood. Discuss the problems and possible solutions. Assignment: Students will make their own survey questionnaire. Optional: Use this *Survey Money* article <https://www.surveymonkey.com/mp/survey-question-types/> as a reference to the 6 main types of questions. Some sample survey questions: How do people decide what job they do? How do people decide where they want to live? Do people rent or own the place they live? What kind of car do people in our neighborhood drive? Draw the facade of houses in the street you live in. How many houses? How many people? What is the total area? How can you show racism with numbers like credit scores?

Third Series of Lessons (5th Grade Social Studies standards on geography)

Activity #1: Assignment: From the list of social issues made in the previous lesson, choose a social issue and pick a public space in your neighborhood. Start designing a "people place" with questions such as: What your ideal "just" people place would look like? How do individual impact the environment and how the environment impact you and your neighborhood?

Activity #2: Collaborative learning and independent work: Have students research online, share different solutions, and test out a solution based on data collected from previous survey.

Activity #3: Celebration of Student Projects: Students will make a visual presentation (Google Slides, posters, drawings, 3-D models) to present to the class. Depending on student interest and resources, execute the design of our “people places” together as a class.

Appendix

Appendix: Standards Addressed

The unit incorporates English Language Arts (ELA) Common Cores Standards in Writing and Speaking in order to develop routine writing, and practice speaking and listening by posing questions and elaborating on the responses of each other, National Council of Teachers of Mathematics Standards on data analysis, and Pennsylvania Social Studies Standards (5th Grade) on geography, more specifically the human characteristics of places and regions within their school communities, neighborhoods, and county.

1st series of activities (with the use of accordion books) will address the ELA Common Cores Standards in Writing and Speaking: W.5.10: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. SL.5.1.C: Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others. <https://www.education.com/common-core/fifth-grade/ela>

2nd series of lessons (with the use of data visualization) will address the National Council of Teachers of Mathematics (NCTM) Standards on Data Analysis and Probability which read: Instructional programs from prekindergarten to grade 12 should enable each and every student to: Formulate questions that can be addressed with data and collect, organize, and display relevant data. Use appropriate statistical methods to analyze data. Develop and evaluate inferences and predictions that are based on data. Apply basic concepts of probability. <https://www.nctm.org/Standards-and-Positions/Principles-and-Standards/Data-Analysis-and-Probability/>

3rd series of lessons (with the use of observation, surveys and placemaking designs) will address the Pennsylvania Social Studies Standards (5th grade) on Basic Geography and the Human Characteristics of Places and Regions: PA.7.1.6.A.1: Basis on which maps, graphs and diagrams are created with field observations and surveys. 7.1.6.B.4. Ways in which different people view places and regions (e.g., places to visit or to avoid). 7.1.6.B.5. Community connections to other places: Dependence and interdependence; Access and movement. 7.3.6.A.1. Spatial distribution, size, density and demographic characteristics of population at the county and state level. 7.3.6.B.2. Spatial arrangement of cultures creates distinctive landscapes (e.g., cultural regions based on languages, customs, religion, building styles). 7.3.6.D.2. Factors that influence the location and spatial distribution of economic activities (e.g., market size for different types of business, accessibility, modes of transportation used to move people, goods and materials). <https://www.perma-bound.com/state-standards.do?state=PA&subject=social-studies&gradeLevel=5>

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