African Innovators: Solving Problems, Changing the Narrative

TEACH AFRICA 2021-2022

Irohin: Taking Africa to the Classroom



Cover Photo

Diébédo Francis Kéré is the first African and first Black architect to win the Pritzker Architecture Prize (2022). The Burkinabè architect was recognized for his extensive body of work, which "empowers and transforms communities". In this cover page he designed the Benin National Assembly. The award is granted annually and is often referred to as "architecture's Nobel" and "the profession's highest honor."

Dr. Agnes Ngoma Leslie Editor

Arlie Birket Designer

Table of **CONTENTS**

The Center for African Studies Outreach Program U

Understanding the Size of Africa

n

New Look for Africa on Corrected Maps

Transforming Africa During the Covid-19 Pandemic Kelly Nellany

African Innovators: Solving Problems, Showing Resilience, and Changing the Narrative Kaylee Fudale





74

26

30



Angela Jones

Amy Bowen

Isha Elkins

Globalization and Interconnectivity: Coltan in the Democratic Republic of Congo, It's Hidden Cost and Development Bianca Woodard

The Winning Formula: How African

Endurance Athletes Finish Strong

Women in South Africa: How they

African Women Writers

Continue to Shatter the Glass Ceiling

A Paralled History of Injustice in Africa and in the US Molly M. DePaiva



African Names: Comparative Activism on Reclaiming Identity and Geographical Spaces Kendriana Drayton-Miller



Going Home: "Root" Tourism in Africa Tanisha Dudley-Williams



African at Heart: How Race Literacy can Aid Our Students Lee W. Reed



Symbols of the Asante Chelsea Bowlin



Adinkra Symbols from Ghana and their Appropriation in Modern Culture Shauna Quirk

Teaching Precolonial African Empires Stephanie Schuette

African Oral Traditions: Pre-Colonialism, Colonialism, Today, and the Future Carrie Wells, Ed.D.

Africa's Early Iron Age: Re-examining the Source and Innovative Approaches Diane Gow McDilda

Untangling Berlin: It's Impact on the African Continent Mark Pontoni

Works Cited

OUTREACH PROGRAM

The Center for African Studies is partially funded under Title VI of the Federal Higher Education Act as a National Resource Center on Africa. One of only 10 in the U.S., Florida's only Center is located in the southeastern United States. The Center directs, develops, and coordinates interdisciplinary instruction, research, and outreach on Africa. The Outreach Program includes a variety of activities whose objective is to improve the teaching of Africa in primary and secondary schools, colleges, universities and local communities. The following are some of the regular activities which fall under the Outreach Program:

Publications

The Center publishes and distributes teaching resources including Teach Africa, a publication for K-12 teachers.

Teachers' Workshops

The Center offers in-service workshops for K-12 teachers about instruction on Africa throughout the school year.

Community & School Presentations

Faculty and graduate students make presentations on Africa to local communities and schools.

Summer Institute on Africa

Each summer the Center offers a two-week summer institute for K-12 teachers.



2021 Summer institute participants and contributors to this publication: Felicity Aku Tackey-Otoo (Institute Program Assistant), Gwendolyn Zoharah, Mark Pontoni, Darryl Wingate, Gretchen Brehm, Jerilyn Rogers, Molly Depaiva, Marcie VanDuinen, Albert Nistico, Renee Connor, Christina Frascino, Eva Williams, Stephanie, Kendriana Miller, Bianca Woodard, and Dr. Agnes Leslie (institute Director). *Countries are randomly picked and do not represent the participants' origin.

Understanding the Size of **AFRICA**

Africa is more than three times the size of the contiguous United States; there are more than 500 extant languages spoken across more than 50 countries; and the landscape spans from desert to rainforest. Languages, cultures, scenery and even the hemispheres change as you traverse Africa. This map may help us understand the true size of Africa and it's diversity.

NETHERLANDS

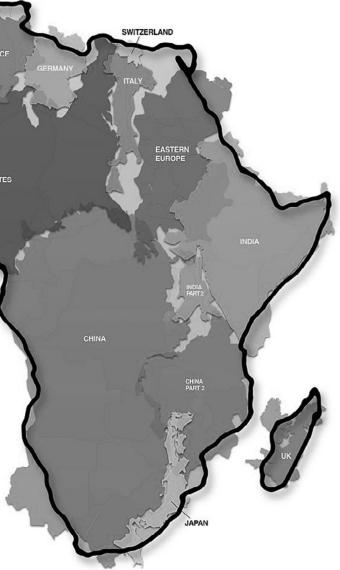
The True Size of Africa

A small contribution in the fight against rampant Immanpancy by Kai Kraus

Graphic layout for visualization only (some countries are cut and rotated) But the conclusions are very accurate: refer to table below for exact data REL GIUM

COUNTRY	AREA x 1000 km ²
China	9.597
USA	9.629
India	3.287
Mexico	1.964
Peru	1.285
France	633
Spain	506
Papua New Guinea	462
Sweden	441
Japan	378
Germany	357
Norway	324
Italy	301
New Zealand	270
United Kingdom	243
Nepal	147
Bangladesh	144
Greece	132
TOTAL	30.102
AFRICA	30.221

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5 · African Innovators: Solving Problems, Changing the Narrative

New Look for Africa on **CORRECTED MAPS**

In an age of "fake news" and "alternative facts", authorities in the city of Boston believe their new school map offers something closer to the geographical truth than that of traditional maps, and hope it can serve an example to schools across the nation and even the world.

The school district dropped the Mercator projection, which physically diminished Africa and South America, for the Peters, which cuts the developed world down to size.

The Gall-Peters projection shows land masses in their correct proportions by area, putting the relative sizes of Africa and North America in perspective.

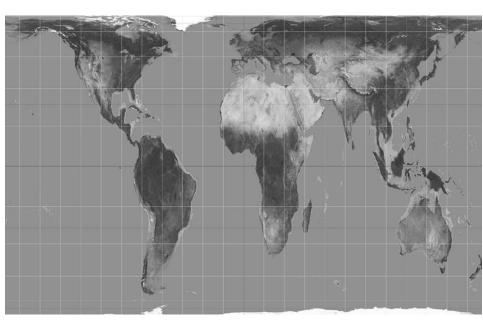
When Boston public schools introduced a new standard map of the world, some young students felt their world had changed.

The USA was small. Europe too had suddenly shrunk. Africa and South America appeared narrower but also much larger than usual. And what had happened to Alaska?

For almost 500 years, the Mercator projection-designed to aid navigation along colonial trade routes-has been the norm for maps of the world.

In the Mercator system, North America and Europe appear bigger than South America and Africa. Western Europe is in the middle of his map.

South America is made to look about the same size as Europe, when in fact it is almost



The Sallie-Peter projection shows correct proportions putting the right size of Africa

twice as large, and Greenland looks roughly the size of Africa when it is actually about 14 times smaller. Alaska looks bigger than Mexico and Germany is in the middle of the picture, not to the north.

The switch to the Gall-Peters Projection sees Boston's public schools follow the lead of the United Nations, which has advocated the map as a more 'fair', less Eurocentric representation of the world, as have several aid agencies.

Teachers in the 2nd, 7th and 11th grades received their new maps, and said the reaction from their students has been fascinating. "It's "interesting to watch the students saying 'Wow' and 'No, really? Look at Africa, it's bigger", Natacha Scott, director of history and social studies at Boston public schools, told The Guardian.

"Some of their reactions were quite funny," she added, "but it was also amazingly interesting to see them questioning what they thought they knew." Mar. 20, 2017 (GIN)

Kelly Nellany **TRANSFORMING AFRICA DURING THE COVID-19 PANDEMIC**

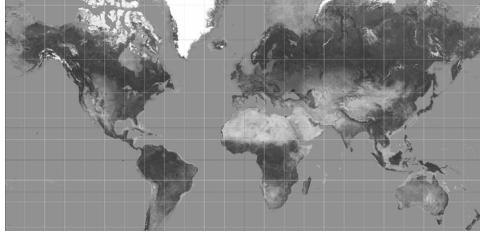
Africa was in the midst of a digital transformation before reports of the coronavirus started to come from Asia in early 2020. The continent was in the midst of the world's fastest rate of broadband connections and E-commerce growth. According to a report by GSMA in 2017, the number of mobile internet subscribers in Sub-Saharan Africa tripled since the start of the decade, and it is predicted that over half the population of Africa will have mobile internet access by the year 2025. This growing ownership of low-cost cellphones and cellular coverage opens a new market for Africans to do business, access information, and respond to a pandemic.

An Adapting Economy

Most countries around the world experienced some form of shutdown during the coronavirus outbreak. With many citizens ordered by their government to stay at home, the mentality of buying and selling online is rapidly changing in Africa. In an effort to avoid spreading Covid-19, Kenya's President Uhuru Kenyatta urged people to move to cashless transactions. In Kenya, the mobile money platform, M-Pesa now has more than 20 million active users. In a McKinsey survey of consumers in key African economies during the pandemic, over 30 percent said they were increasing their use of online and mobile banking tools.



World Health Organization Director-General Tedros Adhanom Ghebreyesus, praised South Africa's work to make COVID vaccines. (Source: AP Photo/Nardus Engelbrecht)



The Mercator projection, the map most commonly seen hanging in classrooms and in textbooks, gives the right shapes of land masses, but at the cost of distorting their sizes in favor of the lands to the north.

The crisis is also sparking innovation as African companies find new ways to serve the needs of consumers. African manufacturers are stepping up to produce essential medical supplies on the continent. This could contribute over a billion dollars to Africa's manufacturing output in 2020. Clothing companies across Africa adapted their businesses to meet the demand for essential medical gear that is not typically manufactured in African countries. Textile and Clothing factories in Kenya, South Africa, Egypt, Ghana, Tunisia, and Senegal began to make masks, ventilators, and other goods. The Kitui County Textile Centre in Kenya was about to send 400 workers home to comply with social

distancing measures when the government announced a shortage in masks and other PPE. Rather than close the factory and not pay employees, the team now makes over 30,000 masks a day and is able to continue to pay their workers.

Food and agriculture companies are also finding new ways to transport their product to customers. Market sellers in Uganda are using an app to sell and deliver fruits and vegetables. The Market Garden App, which launched in 2018, now gives over 30 women vendors from two markets a way to continue to earn an income during the lock down. Another Zimbabwean startup company, Fresh In A Box, also delivers fresh produce. Both companies use motorcycles to deliver food to customers thus reducing the risk of spreading infection at crowded markets and preventing people from starving while markets are closed.

Technology to Inform and Prevent the Spread of Coronavirus

Africans are using technology in new ways to combat and spread awareness of COVID-19. In Nigeria, the Wellvis company created a *Triage Tool* which allows users to self-asses their Coronavirus risk category for free. Patients simply answer questions about their symptoms and history of exposure. In return they are offered either remote medical advice or they are sent to a nearby healthcare facility. This tool is reducing the number of unnecessary calls to disease control hotlines and helping to ease anxiety about the disease.

WhatsApp is another interactive app used by the South African government to answer questions about COVID-19 symptoms, myths, and treatments. Receiving quick, clear information about the virus allows for South Africans to take preventative steps and understand a plan of action without spreading unwarranted fear. Praekelt.org, a non-profit company developed the WhatsApp service in South Africa and is now working with the World Health Organization to deliver information on demand about the coronavirus around the world.

Even with more access to information about the virus, many countries in sub-Saharan Africa do not have the technology or even access to essentials to prevent an outbreak like COVID-19. Many people



Students drink from bottles of Covid Organics, a herbal tea touted by Madagascar President Andry Rajoelina as a powerful remedy against COVID-19, at a high school in Antananarivo. (Source: Getty images

in Liberia do not have running water at home, so some supermarkets constructed outdoor hand-washing stations to ensure their customers can wash their hands and health workers in Uganda also installed hand washing stations known as "Tippy-*Taps*" made from tree branches, rope, and recycled cans filled with liquid soap in both central locations and in people's homes. Health care officials around the globe note that introducing hygiene measures in public places is key in protecting the lives of people living in areas of low-income from diseases.

Merging Old and New Medical Practices

Just like the technology is making its way into African culture, African spiritualism and Indigenous herbalism is also merging with traditional medicine practices of the West in a slow process over the last two centuries. The arrival of Europeans and the colonization of parts of Africa marked a turning point in the history of traditional medicine of indigenous people. In some areas, traditional African healing practices were banned and indigenous medicine was stigmatized because of the over-riding power of Western medicine. However, in post-independence Africa, many efforts have been made to recognize traditional medicine as an important part of the health care delivery system in Africa. In the 1980's policies were put into place to accredit and register native healers,

and in the year 2000 Ministers of Health

urged research and clinical efficiency

trials of traditional medicine. A majority of Africans use traditional health care along with some western practices. Likewise, many traditional Western medicinal practices are stop the spread of coronavirus. Community adopting some of the holistic approaches of indigenous people. For example over 4,000 African plants are used in the treatment of many diseases and illnesses.

> One plant in particular is the Artemisia Annua, or sweet wormwood, which belongs to the daisy family is native to China. Artemisia Annua gained global attention as an effective medicinal plant for malaria therapy and control. When COVID-19 began to cause panic across the world, many African communities that lacked pharmaceuticals and trust in western medicine to combat the novel coronavirus, turned to this medicinal plant. The president of Madagascar, Andry Rajoelina promoted a drink marketed as Covid-Organics which contained the Artemisia Annua as a cure. More than twenty African countries ordered the herbal drink in the beginning of May. On May 4, 2020 the World Health Organization stated that medicinal plants should be further tested so that Africans can safely use them as possible treatments for COVID-19. The specially grown Artemisia Annua is currently being tested in Africa to determine its effectiveness in fighting coronavirus infections.

Learning From Past Outbreaks

African health care systems felt the heavy brunt of many of the world's epidemics over the past century. The Ebola outbreak of 2014-2016 claimed the lives of over 130,000 Africans. Twenty-five million Africans live with HIV today and

a million people die from it each year. Other diseases like Malaria, Measles, Meningitis, and Cholera are also linked to devastating outbreaks in Africa. Over 430,000 Africans die of Malaria annually. Due to these numbers, public health experts from around the world and the global media warned that Africa could become the next epicenter of the Covid-19 pandemic. The world predicted that the coronavirus would have the same catastrophic effects in Africa as other diseases. While speaking on CNN, Melinda Gates painted a grim picture of Africa in the near future. She predicted that the pandemic would have catastrophic effects on the developing world, imagining bodies lying on the crowded streets of African countries. She and others have vet to be proven right in their grim projection of Africa!

The large continent of Africa is home to 55 diverse countries with over 17% of the world's population. According to World Data Lab, 27 of the world's poorest countries are in Africa. One in three Africans live below the global poverty line. It is also noted that while most sub-Saharan African countries are slowly becoming digitized, they have very few trained doctors and nurses and even less intensive care units. It is no wonder experts around the world worry about Africa's vulnerability to Covid-19!

The world does **not** link Africa's past epidemic experiences with a strong health care system, but it seems the world's bleak view of Africa may need a transformation! While countries in North America and Europe scrambled to control Covid-19, Africa surprised the world and was able to contain the virus for several months. At the end of May, the World Health Organization reported that 1.5% of the world's cases of COVID-19 and less than 0.1% of deaths were from the continent of Africa. In terms of COVID-19 cases and deaths, the WHO reports Africa was the leastaffected region globally.

African health care systems were quick to employ strategies and initiatives that worked in past outbreaks to fight the spread of the new virus. These countries know how quickly a virus can spread and implemented many steps before even having any confirmed cases. In Uganda

large gatherings were banned, and in Kenya schools were shut down. Applying lessons learned from Ebola, the Nigerian government separated people presenting symptoms of the disease into specialized clinics separate from the regular health system.

Another country to respond early was Senegal. The government closed borders and initiated a comprehensive plan for contact testing as soon as the first international alert of the virus went out. The country also offered a bed for every suspected coronavirus patient in either a hospital or community health facility, easing the spread of the virus to families whom tend to live in multigenerational households. As a result of these measures, the country with a population of over 16 million had less than 7,000 cases of Covid-19 and only 58 deaths as of June 30, 2020.

Contact tracing is a practice being used in Senegal and other countries in Africa as a successful strategy in preventing the spread of diseases. People in close contact with someone infected with a virus, such as Ebola, are at a higher risk of becoming infected and potentially infecting others. Identifying and contacting all people considered to have been exposed to an infected person prevents further transmission of a virus. Now this practice is being successfully used to trace contact of people with COVID-19.

New advances are being made in developing a digital forum to trace the virus in Kenya. FabLab is working on a contact tracing app called Msafari, named after the Swahilli word safari which means journey. This high-tech app tracks passengers on their "jouney" using public transportation. If a passenger tests positive for the coronavirus, the app will be able to trace all the contacts that used the same vehicle to alert them to test and quarantine.

Making Testing Accessible

To trace infected patients, communities must have a means to adequately test for the virus. One of the most noted problems with the current pandemic in any community is access to adequate testing. Africa is the second most populated continent with

a population of over 1.216 billion people. However, according to the World Health Organization on May 26th, only 1.5 million Covid-19 tests have been conducted in Africa, with over half of the tests occurring in just two of the more modernized countries of South Africa and Ghana. Many African based research facilities are in the process of developing testing kits that all Africans can get their hands on.

Scaling up testing with limited financial resources is now becoming feasible with the implementation of pool testing in African countries. Pool testing is when samples from several people are combined in a single tube and tested for detection. If the results from the tube are negative, all patients in the pooled sample are declared not to have Covid-19. If the results of the pool are positive, each patient's sample is then individually tested. Advantages to this group testing include the low cost and quick turn-around time, while the most significant disadvantage is the decreased sensitivity of the test that can lead to a miss of a positive case.

Dr. Amadou Sall, the head of the Pasteur Institute in Dakar, and his team are working in partnership with a British biotech company called Mologic to develop a rapid detection kit in order to bring more tests to the people of Africa. They are producing two tests that could provide results in about ten minutes. With a cost of less than a dollar per kit, the goal of these tests is to reach remote populations in Africa where a well-equipped lab may not be nearby. The company also hopes to manufacture the test kits in Dakar, thus boosting the economy of the country.

Several other African innovators are working on new ways to test for the coronavirus. Dr. Amo Boateng, a professor at the University of Sunyani, Ghana, is working on a testing method that works when a sensor is connected to a mobile phone that can provide COVID-19 results in less than a minute. He is also screening existing drugs and generating new drugs in search of possible solutions to cure the disease.

African Leads the Way With Innovations

With the number of positive tests rising in African countries in late June 2020, many citizens requiring hospitalization or advanced health care. Africa has the lowest number of doctors and nurses per capita in the world. To protect these workers, Rwanda's government installed five robots to help manage the



The robots are easy to operate, and save the staff valuable time. (Source: Image: REUTERS/Clement Uwiringiyimana

Coronavirus. The robots perform several tasks including mass temperature screening, monitoring patient status, and keeping the records of COVID-19 patients. The artificial intelligence can collect visual and auditory data of patients and notify healthcare workers of anything abnormal. The robots can also be programmed to communicate and educate patients and workers on the dangers of the virus. Other countries around the world are currently developing robots like these in Rwanda that can be used for disinfecting, screening, and managing the disease which could remove humans from harm's way during a pandemic.

Robots are not only keeping health care workers germ-free, they are also being used for other tasks that would otherwise be impossible. In Rwanda and Ghana, a US-based company called Zipline is using drones to transport medicine, blood, tests, and vaccines across terrain that could take hours or even days by ground transportation. Doctors can also use Zipline to quickly test for COVID-19 around the country. This allows health care experts to monitor and respond to the spread of the disease in remote areas that previously lacked medical care facilities.

kits, ventilators made by car companies to

masks made by textile companies, herbal

drinks to a vaccine trials, Africans are

showing ingenuity and creativity in the

face of COVID-19. And it is time the

world takes notice of Africa. It is time the

world reverses its thinking of Africa. It is

time to look at how Africa is tackling this

worrying about how to save Africans, the

world should be looking to learn from the

resilient Africans in the wake of the next

pandemic and learn from the mistakes

and successes of Africa. Rather than

pandemic.

Africa is joining nations around the world in the race to make a successful COVID-19 vaccine. The first trial for a vaccine in Africa began in South Africa on June 24, 2020. The vaccine was developed by Oxford University's (UK) Jenner Institute. Two thousand volunteers between the ages of 18 and 65 will receive the vaccine and be monitored for twelve months to see how the vaccine guards against COVID-19. The early phase of this trial is looking at safety by monitoring symptoms such as temperature, blood pressure, and other pain that could be side effects of the vaccine.

Lessons Learned From Africa

The pandemic has inspired a wave of global innovations, and this is especially true in Africa. The people of Africa are using new technological advances and lessons learned from previous experiences to fight off the coronavirus pandemic in unprecedented ways. From public handwashing stations to affordable rapid test

Lesson Plan

Making Observations and Inferences Through Pictures

- supplies.
- about what they think is happening in the pictures and where the pictures might be taken.
- about African innovations.

As an extension, allow students time to compare the events in Africa to what happened in their communities. Depending on the age of students, you could compare Coronavirus statistics, treatment strategies, or ways daily life changed in different parts of the world.

STEM Challenges:

Give students the opportunity to become engineers and problem solvers by creating hands-on solutions to real-world problems like constructing hand washing stations in Africa to prevent the spread of Covid-19. Gather materials for collaborative groups. You could include smaller objects like straws, yarn, and dixie cups or life-size materials including tree branches, rope, and used cans.

Introduce the challenge by reading the article about how health care workers in Uganda installed hand washing stations called Tippy Taps in central locations in town.

Lead a discussion about how proper hygine helps stop the spread of disease and why these stations are important. Look at pictures of the Tippy Taps and allow time to discuss the rules of the challenge, possible solutions, and appropriate behavior. Be sure to remind students to have a growth mindset throughout the challenge, learning from mistakes and trying new ideas.

Distribute materials to look at and give groups 15-30 minutes to brainstorm ideas and write a plan. Next collaborative groups will need an additional 30-45 minutes test and improve their ideas by building a model hand washing station.

Once all groups have completed their model, they can share their Tippy Taps with the class. This can be done as a gallery walk or as an informal presentation.

Lastly hold a debrief conversation with the class about what worked and what needed to be improved. How did you feel about collaborating with others? Did you feel frustrated during any parts of the challenge? What did you learn during this challenge?

1. Share pictures from news articles one at a time. Photographs could include the one with robots in Rwanda screening patients, a student in Madagascar drinking Artemisia-based herbal medicine, or a Zipline drone delivering medical

2. Ask the students to make observations and describe the details of the picture. Next, ask students to make inferences

3. Finally, read the article or summarize the event occurring in the photograph and give students the chance to learn more

4. Discuss the following: What problem is this innovation solving? Could the same strategies be used in our communities?

Kaylee Fudale

AFRICAN INNOVATORS: SOLVING PROBLEMS, SHOWING RESILIENCE, **AND CHANGING THE NARRATIVE**



Tapiwa Chiwewe's AI Pollution Detector (Source: BorgenMagazine.com)

land of Kenya. Because of this, she was beaten and arrested several times. In 1989, Maathai staged a protest to prevent the construction of a skyscraper in Nairobi's Uhuru Park. This response drew international attention and the construction project was dropped.

In addition to conservation, she was an advocate for human rights, AIDS prevention, and women's issues. In 2004, she was the first African woman to win the Nobel Prize. Wangari Maathai died in 2011 at the age of 71 after a battle with ovarian cancer. The legacy of Maathai is alive and thriving.

Dr. Tapiwa Chiwewe

In his TED talk titled "You don't have to be an expert to solve big problems", Dr. Tapiwa Chiwewe discusses the idea of seeing a problem and thinking "What can be done?" Chiwewe, a Zimbabwe-born research manager at IBM Research in South Africa knew, as a citizen, he could not stand by as he noticed his city engulfed in a cloud of air pollution. "One winter morning, a couple of years ago, I was driving to work in Johannesburg, South Africa, and I noticed a haze hanging over the city...It didn't take long for me to realize that I was looking at an enormous cloud of

air pollution....At that moment, I felt an urge to do something about it, but I didn't know what" (Chiwewe, 2017). Although Chiwewe faced uncertainty and there was no guarantee of success, he tried. Chiwewe was concerned about the pollution in the city, but he was not an environmental expert. In his TED talk, he says "Even if you're not an expert in a particular domain, your outside expertise may hold the key to solving big problems within that domain. Sometimes the unique perspective you have can result in unconventional thinking that can move the needle, but you need to be bold enough to try" (Chiwewe, 2017).

He took the initiative to solve the problem and he became a student once more, researching air pollution and learning Aziza Chaouni that it is the world's largest environmental health risk. Researchers believe that more than 700,000 Africans die each year because of air pollution. (BBC, 2020). Chiwewe realized that he wanted to make a change, but he needed help. He began to speak to city officials and local scientists to learn more about the problem. His goal was to create an online air-quality management platform that would uncover trends in pollution and project into the future to determine expected outcomes. With colleagues from South Africa and China, they created an air-quality support system

In her TED talk video titled, "The Dangers of a Single Story," Chimamanda Ngozi Adichie spoke about the single narrative surrounding the continent of Africa. This single story, believed by many Americans, is that Africa as a place with "beautiful landscapes, beautiful animals, and incomprehensible people, fighting senseless wars, dying of poverty and AIDS, unable to speak for themselves and waiting to be saved by a kind, white foreigner" (Ngozi Adichie, 2009). This single story of Africa fails to acknowledge the stories of innovations that have happened and are happening on the continent. The editor of Quartz Africa Yinka Adegoke says, "The narrative in Africa has moved from seeking foreign-solutions-for-African-problems, to discussing African-solutions-to-Africanproblems. And, as our coverage (and the efforts many of these innovators) shows, it's now moving toward a narrative of African-solutions-to-global-problems" (Adegoke, n.d.). Africa's narrative should be positive, not just based on the beauty of the landscape, but because of its people. African innovators have been, and are continuing to solve problems, show resiliency, and move Africa forward.

Wangari Maathai

Wangari Maathai was born in Nyeri, Kenva in 1940. Her father was a farmer and although uncommon, her family decided to send her to school and she started at a primary school when she was 8. Maathai was an excellent student and continued her education, first at Loreto Girls' High school and then at Mount ST Scholastica College in Kansas where she received scholarship. In 1964, Wangari Maathai earned her bachelor's degree in

biology and two years later, she completed her master's degree. In 1971, Maathai became the first woman in East Africa to earn a doctorate degree when she studied veterinary anatomy at the University of Nairobi. She became the first woman to become a university department chair in East Africa.

Maathai saw that as development moved through Kenva's country, the forests, and lands were being depleted. She wanted to negate the negative impact that deforestation had on the environment. Although seen as small, Maathai started to replace some of the lost trees by planting one tree at a time in her backyard. To start, she planted nine seedlings. Maathai planted more and more trees and

in the planting. In 1977, Maathai launched the Green Belt Movement, which not only began to reforest Kenya but helped women. Maathai explained ""Women needed income and they needed resources because theirs were being depleted. So, we decided to solve both problems together" (Biography.com Editors, 2019). Maathai would pay the women for each seedling that was living after three months. This movement has been responsible for planting more then 51 million trees in Kenya and is providing roughly 30,000 women with opportunities and skills (The Green Belt Movement 2020).

eventually convinced other women to join

Maathai challenged the government's development and how it handled the



Wangari Maathai (with shovel), winner of the 2004 Nobel Peace Prize, participates in a tree planting ceremony in the North Garden of UN Headquarters, 2005. (Source: Evan Schneider/UN Photo)

that analyzes real-time and historical data to uncover trends in pollution. The results of this technology would allow citizens and city officials to make changes. With an accurate understanding of pollution patterns, the city could issue health alerts, suspend polluting activities, and begin interventions.

A pilot of the pollution forecasting technology was completed and covered all South Africa. The data collected from the pilot confirmed the correlation between the forecasting data and the data they were getting on the ground. Chiwewe and his team were able to create cutting-edge technology that can benefit countries around the world.

Fez, founded in AD 789, was the first capital of the country Morocco. The city consists of two old medina quarters and a modern urban area. The medina of Fez is one of the world's largest pedestrian zones and is listed as a World Heritage Site. It is comprised of numerous monumental buildings and is considered one of the most extensive and best-preserved historical towns of the Arab-Muslim world (Centre, Medina of Fez). The Fez River runs through the medina of Fez and was once the city's soul. This river sends water to

private and public fountains. Because of overcrowding and over-development, the Fez River started to become polluted. The pollution caused the river to be covered little by little, starting in 1952, with concrete slabs to contain the smell. A Civil engineer and architect, Aziza Chaouni was born and raised in Fez and was fascinated with the Fez River. While studying at Harvard, Chaouni decided to make the regeneration of the Fez River the subject of her thesis. She proposed the Fez River Project; the goal was to restore its riverbanks, uncover the river, and create new pathways. Chaouni's vision was to reclaim and reconnect these spaces to the rest of the city.

In 2007, Fez received a grant to divert and cleanse the rivers' water. This project has been ongoing for two decades. The team proposed three main interventions to restore the riverbank: a pedestrian plaza, a playground, and a botanical garden. They chose to strategically place the plaza, playground, and garden in order to enhance water quality. Chaouni said that the interventions needed to benefit the population on several levels and be resilient, so that it would function regardless of changes. When the grant was given to Fez, it brought the problems and the potentials of the river to the attention of the public. Chaouni said, "When something becomes that important publicly, there are many new stakeholders that emerge — everyone wants to help the project while projecting their own agendas. Suddenly, many voices started to be heard. But sadly, our input was seen as less necessary or relevant. So, it became something of a battle" (Eng, 2014). Having so many interested in the Fez River created hurdles for Chaouni and her team, there were many interests colliding, which diluted their design ideas. Despite the hurdles and the dilution, the river is uncovered, a process that took three years.

The enhancement of the water quality started upstream with constructed wetlands, canal and bank restoration, and stormwater retention ponds. Now that the river is uncovered, as a city, Fez needs to prevent the newly cleansed river inside the medina from getting polluted. Since there is still construction in the medina, parts of the river are still being polluted. This means that the biodiversity in the medina has not shown much change. However, Chaouni is confident that improvements will take place

in the Medina in time because downstream has noticeable improvements. The Fez River Project is revitalizing Fez.

Aziza Chaouni is working to change the world by making places better. She is the founder of the Aziza Chaouni Projects (ACP) which is a design firm that is 100% women owned. It has offices in Fez and Toronto, Canada. The firm works on a variety of projects that range from furniture to city planning. The goal of the firm is to improve the environment; their motto is "Making better places and spaces" (Chaouni, 2018).

Isatou Ceesay

After World War II, plastic began to be mass produced and can be seen everywhere. Plastic is convenient but comes with consequences. In 2015, researchers found that humans generated 8.3 billion metric tons of plastic, 6.3 billion tons had become waste. Of that waste, 9 percent was recycled, and 79 percent accumulated in the natural world or environment. (University of Georgia, 2017). Since plastic has become so prevalent in the environment, animals have consumed it and it has polluted waterways. Isatou Ceesay, a woman from The Gambia grew

her community of N'Jau. People would throw their waste in the back of their homes and forget about it, but the effects of this appeared quickly. The plastic bags were harming the livestock and polluting the air. Ceesay said that "In Africa, we say that 'if your house is clean but your neighbors isn't, then you are not healthy either" (Riché, 2015). She saw that the impact of plastic bags was dire, and she decided that something needed to be done. In 1997, Ceesay and four other women created the Recycling Center of N'Jau. Their mission was to educate their fellow villagers on recycling. Ceesay began to collect the plastic bags and transform them into something beautiful by crocheting them into purses. Each purse that Ceesay made, recycled 4-10 plastic bags. At first, Isatou Ceesay worked in secret to create these bags and slowly began sharing her work with other women who joined her. She and her friends faced ridicule and limited resources, but the women continued to persevere. In the beginning, Ceesay remembers that "women wouldn't believe we could turn plastic into revenues" (Riché, 2015). These recycled purses created revenue and provided an income for the women. In the early years, many

up watching the plastic bags build up in



Isatou Ceesay started working with four friends 18 years ago, transforming plastics into bags. Her work started in the village of Njau and has expanded to many other communities in the Gambia. (Source: Luke Duggleby/Climate Heroes)

who joined the Recycling Center did not know how to read or write. The income allowed the Recycling Center to get a Skills Center where the women take classes. The plastic bag creations became so successful that women in the N'Jau community became employed and developed financial independence.

Turning recycled items into bags, wallets, and balls for children has expanded from N'Jau to all of Gambia. In 2009, Ceesay became a co-founder of The Women's Initiative-the Gambia (WIG). WIG is recognized as an official community-based organization. Ceesay says that, " with more than 2,000 members in 40 different communities throughout the country, many women and a few men now, and projects with the European Union or the UNDP, my days typically start at 5 a.m. and I end up working until late at night" (Riché, 2015). One victory that Ceesay is happy about is the total ban on plastic bag imports. Shops are now using alternatives such as paper bags and wrappings or reusable bags. WIG is now creating projects beyond recycling that empower women to grow personally and professionally while improving their communities.

Anne Rweyora

Anne Rweyora had access to basic facilities of life. After her father passed, her mother could not afford their home, that is when Rweyora started to realize how housing poverty affects all facets

of life. Rweyora says that "Over 69% of Ugandans are living in substandard housing. This is not only a Ugandan issue but an African issue. In South Sudan, where I worked, the issue was even worse. That's where my energy and desire come from." (Kiunguyu, 2019). Anne hoped to become a civil engineer, a dream she had after her father passed. This dream was denied because after the death of her father, her mother spent most of her income on rent.

Rweyora volunteered in South Sudan as a social worker. She continued to see the need for attainable homes for average women. By 2015, Rweyora launched Smart Havens Africa, a social enterprise that uplifts and transforms lives. The enterprise builds affordable and sustainable homes for low-income, women-headed households. According to their website, they, "build communities, not single homes, and ensure families have full legal ownership of the land where their affordable home is built, so they can never be evicted" (Rweyora, 2020). Anne Rewyora hopes to bring down housing poverty. According to Rweyora, Smart Havens gets the land and then sub-divides it into home units. The homes are built in communities with readily available facilities, health care centers, and accessible roads and water. The homes are eco-friendly; built with local materials that cut construction and transport costs. By using a brick design of interlocking, stabilizing blocks, they do not require plastering or burning and firing, so the cost is cut by almost 50%.

Lesson Plan

Essential question: What can you do to improve your community?

- · Vocabulary: innovation, invention
- · Introduce the lesson by asking students what innovation means to them. Then ask students what inventions they know.
- Show the students Kenya on a map so that they can understand where they are in relation to the country.
- · Read "Wangari's Trees of Peace" with the students.
- · Have students turn and talk to another student what they thought of the book. What did they like? What surprised them? What character traits would they use to describe Wangari Maathai?
- · Ask students to identify a community (city or school) problem. First, they will brain dump on a piece of paper and then share with the class. The teacher will record answers on the board.
- · Show the video "The Hummingbird"
- · Discuss with students how there is no act too small.

By using these techniques, Smart Havens is avoiding air pollution and deforestation, Smart Havens homes use renewable energy, have rainwater harvesting systems, and bio-digestors (Kiunguyu, 2019). Because of her innovation, she was short-listed for the fifth Africa Prize for Engineering Innovation. Not only does the Smart Havens enterprise work to build homes, they also provide skills and economic opportunities to women and youth who are interested in construction or real estate, training and apprenticeship.

Conclusion

There are so many stories of African innovators that need to be heard. Wangari Maathai, Dr. Tapiwa Chiwewe, Aziza Chaouni, Isatou Ceesay, and Anne Rweyora are just a handful of people who are changing the narrative of Africa. Their stories need to be shared and we need to learn from them. Nnamdi Oranye is the founder of the Disrupting Africa Encyclopedia, an online platform dedicated to identifying Africans who can change the narrative of Africa. The mission of the website is to write the stories of these innovators, according to the site. They "believe these exceptional individuals are the key to driving Africa's growth and ensuring we are ready for the next century. Our role is to continuously tell their stories, objectively" (Oranye, Finding Africa's Innovators). These stories need to be told, not just to rewrite the narrative of Africa, but share innovations that can change the world.

• Have students choose a problem, alone or with a partner, and brainstorm what they could do to help solve the problem.

THE WINNING FORMULA: HOW AFRICAN ENDURANCE ATHLETES FINISH STRONG

Imagine each day waking up before dawn in a room in which you share with your teammates. Around 6am, you and your teammates hit your morning long distance run and daily stretching routine. Long runs are especially important each day, after all you are training for a marathon. Although the training courses are undoubtedly beautiful, they are purposefully mapped to include different altitudes, varying surfaces, and challenging terrain. When you go on a long run, you use this time to focus on yourself, train your silence, and concentrate on your body movements. You run with your group so that they can pace, support, motivate, push and challenge each person. When you are finished, you return home to clean up and eat breakfast.

Your breakfast consists of bread and tea. After you eat, you complete household chores with your housemates. Later, you might meet in the team "physio room" for a preventative massage. Then, you eat lunch together. Lunch consists of organically and locally farmed produce and prepared foods such as rice, potatoes, managu (vegetable), ugali (porridge), *mursik* (fermented milk drink), or *chapati* (bread).

In the afternoon, you spend time bonding with your team, resting, and possibly even napping. Prior to your afternoon run, you have a team meeting in which your teammates chat, share, discuss, and strategize all while encouraging one another, expressing

gratitude, and easing the anticipation and anxiety of the impending run. Around 4pm, you complete the planned long distance run and more stretching. You average 120-150 miles of running a week with your community.

Dinner consists of organic, healthy foods rich in complex carbohydrates, lean proteins, and fiber, purposely intended to make you stronger. After dinner, you go to bed around 9pm in the room in which you share with your teammates. You know that eight hours of sleep each night is vital for recovery to prepare to repeat the process the following day. You have sacrificed a life with your family to live with your running community.

Over 30% of all Olympic running gold medal winners are African, both male and female, and are mainly from Kenya and Ethiopia. Furthermore, this statistic does not even include all the silver and bronze medal winners. Although countries like Eritrea, Uganda, Tanzania, and South Africa are also represented in marathon competition, winners are predominantly from Kenya and Ethiopia (Topend Sports, 2010). In the table below, the approximate percentage of African winners for the six major marathons are presented (Britannica Encyclopedia, 2019). It should be noted that female international competition was prohibited until the 1970's, and therefore, female running has a much



Chapati (bread)

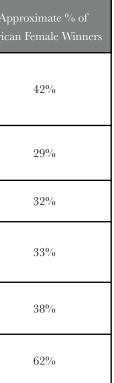
Marathon Locations (in order by establishment dates)	Approximate % of African Male Winners	Ap Africa
Boston Marathon (1897–2019 male) (1872–2019 female)	24%	
New York Marathon (1970–2019)	47%	
Berlin Marathon (1974–2019)	60%	
Chicago Marathon (1977–2019)	50%	
London Marathon (1981–2019)	54%	
Tokyo (2007–2019)	85%	

younger tradition as compared to the male running culture (Cribari, et. al., 2013). It is also noted that over the last three decades, African athlete participation in international marathons has substantially increased (Cribari, et. al, 2013).

African athletes have without a doubt been dominating the world's stage in long-distance running, for decades. Eastern African countries like Kenya and Ethiopia have "[fueled] the world's fastest distance runners" (Olympic, 2017). Marathon runners like Mary Keitany and Eulid Kipchoge are only some of the many African elite and decorated long distance runners considered to be some of the greatest of all time. Not only are they fast, but also their dedication, discipline, and talent is unequivocal and exceptional. On top of that, further investigation reveals their lives are nothing short of inspiring. What makes them so extraordinary? What gives them such an advantage? Collective opinion, supported by an abundance of research, confers that genetics, upbringing, climate, nutrition, and training are the driving forces behind

their continued dominance. However, is it possible that their "attitude systems may be a significant perpetuating influence" (Hamilton, 2000), all the while the real advantages simply lay in a lifestyle beyond any athletic pursuits (Bretzky, 2020).

African marathon winners have repeatedly shown that when the rubber sole meets the road, they have the will and endurance not only to finish strong, but also to dominate races with most of the fastest speeds on record. Much speculation and research has been centered on what makes these athletes so great. Research has indicated that they have a genetic advantage, or that the Eastern Africa climate is ripe for enabling their amazing endurace; that these athletes require less oxygen while running which translates to higher aerobic capacities and more fatigue resistance. And although this research certainly has merit, these athletes themselves report that there is in fact much more to their winning formula. It is a basic yet balanced formula of living a simple and authentic yet disciplined and connected lifestyle. And, although



across the board these athletes attribute diet and intense training regimens as vital to their successes, without mental toughness, community, and teamwork, they would not be as accomplished. In a recent YouTube documentary, Eulid Kipchoge maintained that "You cannot train alone and expect to run a fast time. There is a formula: 100% of me is nothing compared to 1% of the whole team. And that's teamwork. That's what I value."

One of the most obvious and commonly proposed reasons for African prominence in long distance running is genetic makeup. Although measurements and proportions of Olympic athletes have varied over the years, African runners overall are thinner and leaner (Wood, 2015). Like the "modern elite marathoners, exemplified by the Kenyans," (Wood, 2015), this combination helps the runner to harness optimal speeds. With a more effective running-style body of moderate height, thin ankles and skinny calves, these elite athletes "exhibit greater fatigue resistance, lower lactate accumulation, and higher oxidative enzyme activity" (Weston, et al. 1999) Their lighter and lankier builds, require less oxygen allowing them to perform at a higher level. This is, apparently, the perfect, winning combination.

Since most African athletes come from modest and even poor backgrounds, hardship and challenges have shaped their lives. Little food and money, farming and cooking only what is available, walking hours for water, or running to school with no shoes are often a regular part of daily life. In fact, in the Eastern African locales, athletes studied "run or walk an average of 8-12 km a day, five days a week from ages 7-8 years, increasing to 90km a week as adolescents" (Hamilton, 2000). For example, Mary Keitany's "impoverished upbringing" required that she walk each day "two kilometers carrying a pail, hoisting her scrawny body uphill to retrieve water from a nearby river for cooking and drinking" (Gearhart, 2019). Her family also lacked the daily

necessities of electricity, food, money and even running shoes such that she often ran barefooted. All these elements contribute to a naturally lean and lanky build which builds fatigue resistance and increases overall performance.

Another predictable assumption is that Africans have the advantage because of the climate and environment in which they train. Plenty of research has been conducted to prove that the African climate, specifically Kenyan and Ethiopian, are conducive to producing endurance athletes. The combination of organic and natural surroundings, tropical heat, high altitudes, and soft running surfaces result in these athletes requiring less oxygen while they train and therefore exhibiting a higher aerobic capacity. The athletes spend most of the time running in nature and using the organic training resources that are accessible and affordable.

The African endurance athlete's diet is simple and based on what foods are available and affordable. Most Kenyans work on family farms and harvest their own foods. They work hard to prepare good nutrition. Since meat is considered a luxury, and they have little options, they derive protein sources from local vegetables, beans and mursik. Mursik is a fermented milk drink that is full of organic protein and good bacteria for the stomach (Olympic, 2017). What meat they do ingest is organic, local, and lean. For carbohydrate sources, they prefer rice, potatoes, and Ugali which is a healthy, complex carbohydrate filled with fiber and iron to make the body strong (Olympic, 2017). Their nutritional profile causes them to be the healthiest runners in the world. Getting almost all their nutrients from plant-based protein rich foods, and lean, organic meats coupled with a high, complex carbohydrates purposely helps in fueling their training, performance, and recovery.

Aside from the obvious that



Mimi Belete crosses the line to win gold in the Women's 500m Final at Aoti Main Stadium during day fourteen of the 16th Asian Games Guangzhou 2010. (Source: Adam Pretty/Getty Images)

explain the success of African marathon runners, community, teamwork, and family are at the heart of their lifestyles, such that without it they consider themselves fragmented or incomplete. They run, farm, cook, eat, live, support, and give to each other, and they do this for the benefit of the whole community because without this connection, they believe they could not succeed. In a 2019 marathon in Vienna, Eulid dedicated his marathon personal record to the "members of his team, including the 41 professional runners who had acted as pacesetters during the run" (Keh, 2019). They are motivated to run, filled with pride and gratitude for their community and families, and strive to serve as models for the children and other athletes in their villages. In fact, Mary Keitney is so committed to her heritage that she regularly donates winnings to her community and collaborates to build schools in her hometown (Gearhart, 2019). Their bond with community, team, and family is pure, unselfish, and dedicated to the whole.

Mental fortitude is also inherent in the way of life of every successful

African endurance athlete. Like community, mental toughness is the heart of the athletes' formula for winning, and as stated by Kipchoge "the single most important piece of marathon success" (Bretzky, 2020). Their life experiences foster their exceptionalism. One cannot deny the magnitude of these athletes' unstoppable drive to finish strong in every endeavor whether it be to win or to simply complete daily chores.

At the end of a race when it is so vital to sprint to the finish, these runners' harness their strength, so that in those last minutes of the race, they resist fatigue, and push out past others to an unmatched victory. According to the article on the World's Marathon website "It is in those last couple of miles when the body is on autopilot and all the training, nutrition, experience, athleticism and genetics begin to kick in to overtake the person and the race (2017). African runners have proven that they have a much higher resistance to fatigue than their racing counterparts, especially during high intensity endurance workouts (Weston, et. al., 1999). Since "athletes

are fostered in villages which [entail] more daily physical activities," their lives are much more difficult than other cultures, requiring long hours of manual labor work and a great deal of determination and strength (Larsen, 2003). After Mary's Keitany's marathon victory, a competitor acknowledged her mental toughness and endurance by stating "The way she can execute and crush the competition over the last half makes her an athlete to be celebrated (Pugmire, 2018).

With the emergence of the Covid-19 pandemic, Olympic and marathon competitions have been postponed and even cancelled. Runners are unable to train communally, and compete, forcing them to turn to other sources for income. Mimi Belete, Ethiopian Olympic athlete, expresses how tough it is not being able to train with the group and that when "training alone sometimes [she feels] very weak and hopeless" (van der Wolf, 2020). Mimi illuminated the unparalleled influence and effects of communal training. Unfortunately, this pandemic is revolutionizing how these athletes are training since they must now train alone. For established athletes, alternate sources of income are not yet a problem. The hope is that Covid-19 will soon be overcome, and racing can continue, and it can only be assumed that this pandemic is just another barrier for these athletes to overcome and increase their mental fortitude and



dedication.

Kipchoge recently proclaimed, "Together, when we run, we can make this world a beautiful world." (Keh, 2019) One can't help but be inspired by the connected lives of African endurance athletes. Their beautiful stories inspire one to don running shoes and emulate them. Reading about these athletes, watching documentaries, learning about their experiences leaves one feeling triumphant, like anything is possible. A clear portrayal of exceptional athleticism, their winning combination,

Lesson Plan Idea

- Language Arts: Students choose an African athlete to research and write a paper. Answer questions: What contributes to this athletes' greatness: genetics, climate, upbringing, training, nutrition, and lifestyle?
- Science/Math: Choose an African country and study the climate, environment, and terrain. Or study the agriculture and nutritional habits of African endurance athletes or specific African countries.
- Social/Emotional/Character Development: Show students the youtube videos cited in this article or find other videos athlete's lifestyles can they apply to their own lives?
- Physical Education: Study the training schedule of an endurance athlete. Consider what it would be like to maintain such a schedule for a week. In what physical activities does the athlete engage? Recovery activities?

Kenya's Eliud Kipchoge in action at the 2012 World Half Marathon Championships (Source: Nonijaz/Getty Images

cultural bond, and honest, unselfish motivations propel these athletes to victory in all areas of their lives. Although the stereotypical and commonly agreed upon thinking that genetics, climate, training, and diet are what thrust these athletes to the top, their commitment to community, teamwork, family, and their endless compulsion to rule their mind are equally indispensable contributions to the whole.

on famous African elite athletes. Analyze and write about what factors influence their greatness? What about these

Isha Elkins **WOMEN IN SOUTH AFRICA: HOW THEY CONTINUE TO SHATTER THE GLASS CEILING**

Women's rights and equality has been an overdue issue that is continuously being publicized and talked about around the world, especially after the Me-too movement. What is not publicized enough, is how women in South Africa have been able to and continue to shatter the glass ceiling, from Winnie Mandela to the thousands who stood with her, to the women who are in parliament today. Feminists in South Africa have helped to make movements that have led to a great portion of women being in high political positions. South Africa currently has among the highest proportion of women in Parliament (South Africa: Gender and Elections). In Bolivia and South Africa, for example, the internal structures of political movements enabled women to share their experiences and articulate joint demands in the lead-up to party formation. These structures gradually embraced more explicitly feminist stances, drawing exchanges with women's civil society groups (Brechenmacher, S., & Hubbard, C., 2020).

A Trailblazer for female empowerment, Winnie Mandela:

Women's inequality in South Africa begins with colonization (like many other countries in the world.) According to dictionary.com, apartheid is defined (In South Africa) policy or system of segregation or discrimination on groups of races. From colonial times, South Africa was colonized by the English and Dutch, with the Dutch gaining independence in the



Winnie Madikizela-Mandela, in Johannesburg in December 2017, made the doek, a head covering and symbol of African womanhood, her trademark. (Source: Mujahid Safodien/AFP/Getty Images)

1940s. Apartheid laws were enacted in 1948 in South Africa, which then enacted racist laws on all aspects of life. Throughout history around the world, predominately white men have set up laws or rules to segregate or make themselves superior to all other races. Then, there is separation of gender, making the males more elite than the women. Apartheid was a legal way for the white men to try to control other races, as well as genders. Winnie Mandela is well known for her activism against these racists' laws.

Apartheid was fought predominantly on the streets of South Africa, and the fight was led by the fearless Winnie Madikizela-Mandela, then the young wife of

freedom fighter, Nelson Mandela (Gundan 2018). Winnie Mandela is one of many female activists. Though, she first fought for equality of race, Winnie Mandela was in fact a female activist, fighting for women's equality. Her activism against apartheid led to her being a figure of female power and she broke the chains of not only race, but of gender.

Winnie Mandela died in 2018 and remains one of South Africa's well known female activists today. She is known as "Mother to the Nation" (Hawker). Winnie Mandela started her career as a social worker in South Africa. During the 1950s it was difficult for Black women to attend college. Winnie Mandela earned a degree and



Hlomela Bucwa is a South African politician, a member of the Democratic Alliance. In 2016 she became the youngest member of parliament in South Africa elected at 24.

became the first qualified black social worker in the country (Hawker). This was just the beginning for Mandela's activism. Her iconic status transcends political parties and geographical boundaries, generations, and genders (Hassim 2018).

In 1958, shortly after she married Nelson Mandela and while pregnant with their first child–Winnie, along with tens of thousands of women and men, took to the streets of Johannesburg to protest the issuing of pass books to black women (Hawker). Pass books were a way to segregate black women from "white areas." Mandela was imprisoned and stayed jailed for two weeks to continue to protest racist practices. This was just the beginning of her fight for social justices. Mandela, is a true female pioneer to women around the world to stand up against injustice.

There have been many other brave women in South Africa who have spoken out and brought crimes against them to justice. According to the Carmichele V. Minister of Safety and Security case, a woman was able to tell her true. After being brutally attacked by a man, Carmichele found out that her attacker was free, while also being on trial for raping another woman. The case Carmichele v. Minister of Safety and Security and dealt with the

constitutional obligation of the courts to develop the common law in order to promote the spirit, purport and object of the Bill of Rights. The main issue in this case was the court's competency to broaden the common law concept of "wrongfulness" in the law of delict in the light of the State's Constitutional duty to safeguard the rights of women (Maluleke, Mandonsela 2004). This has led to changes in policies to ensure women's empowerment across South Africa.

South Africa Becomes a **Democratic Country: Continues** to Fight for Equality in Politics

In 1994, South Africa became a democratic country which then "set about redressing social imbalances... (South Africa Country profile, 2019). During the apartheid era in South Africa, there was a mere 2.7% representation of women in parliament; since attaining democracy in 1994, things have changed (Pitamber 2016). In 2019, women held roughly 46% of seats in Parliament, a 43.3% increase from the previous era. After women's activism turned from the direct action of the Women's National Coalition towards the engagement with institutional politics, with a focus on influencing the legislative policy agenda (Gouws, Coetzee 2019).

Still today, South Africa has one

made strides against brutality towards women in the 2001 case, Carmichele v. Minister of Safety and Security, there is still more work to be done. The case Carmichele v. Minister of Safety and Security is crucial for women because it opened the door for women to be heard and cases to be made against violence towards women. It was a huge breakthrough in fighting for victims of physical and sexual abuse in South Africa. Violence against women is a form of gender discrimination as envisaged in international law and the state has a duty to prevent it. Damages may be claimed against the state in appropriate circumstances when it fails to honor its duty to protect women against violence and prosecutors and the police have to think twice before setting dangerous criminals loose in the public (Maluleke, Mandonsela 2004). In 2019, women voters constituted 55% of voters in South Africa (South Africa: Gender and Elections). Women voters in South Africa have been consistent with around 55% of the voting percentage since 2009. There is a clear emphasis that women have ideas for change and this is

of the highest rates of violence against women on the continent (Kumalo,

Abebe 2020). Even though South Africa

To stop the repeated crime of abuse, South Africa is focusing on women's empowerment and gender equality. The African Union has stated that not only have they declared the next ten years as "the Decade of African Women's Financial and Economic Inclusion" but have also set aside funds to help this happen. The funds will help reach those around the continent and to help bridge the gap with gender equality.

The funds could be a game changer if they help women gain economic independence (Kumalo, Abebe 2020). The ability for women to provide for themselves is key to not having to depend on men. When women are given access to education and the workforce, then they are given the ability to choose their life. Throughout history, women have been given unequal

21 African Innovators: Solving Problems, Changing the Narrative

visible today.

rights in education and work. This form of manipulation and control makes it difficult for women to be fully independent. Providing financial assistance to women who are "stuck" in the male gender society can make them use it for education, housing, healthcare, or start their own business. Financial assistance can help break the cruel vicious cycle that limits women around the world to "gender specific roles." With more women breaking the "gender roles" then, more women will know that they can too.

It is not only the African Union that provides funds for women's empowerment. Governments and the private sector in Africa can also contribute to the fund. This will ensure that empowering women is firmly on Africa's political agenda and help overcome the perennial problem of a lack of political will (Kumalo, Abebe 2020). South Africa has specifically put in place laws ensuring that women are represented in politics. South Africa's Municipal Structures Act of 1998 requires political parties to "ensure that 50% of the candidates on the party list are women" and that "women must be equitably represented in a ward committee." Although there is no penalty for noncompliance in South Africa, the country's ruling African Congress voluntarily allocates 50% of parliamentary seats to women (Musau, 2019).

There have been many brave women in South Africa who have spoken out and brought crimes against them to justice. According to the Carmichele V. Minister of safety and Security case, a woman was able to tell her truth about being brutally attacked by a man who was released without bail even though he was on trial for raping another woman. She was not only attacked by this man, but he had also raped another victim and was still free. The case Carmichele v. Minister of Safety and Security and another case dealt with the constitutional obligation of the courts to develop the common law in order to promote

the spirit, purpose and object of the Bill of Rights. The main issue in this case was the court's competency to broaden the common law concept of "wrongfulness" in the law of delict in the light of State's Constitutional duty to safeguard the rights of women (Maluleke, Mandonsela 2004). This has led to changes in policies to ensure that women empowerment is seen to women across South Africa.

It has been said by UN Secretary-General Antonio Guterres that "Only through the equal participation of women can we benefit from the intelligence, experience, and insights of all of humanity" (Kumalo, Abebe 2020). And that is what South Africa has been striving towards. Women are taking political positions, empowering one another, having access to education, and changing the gender norms. South Africa has made big plans for the upcoming decade and plans on continuing to empower women. It is believed that only in equal and enabled Africa will African women be empowered to take their rightful place in society. This needs to be driven by a bold vision where all citizens contribute to and benefit from Africa's development (Kumalo, Abebe 2020).

South Africa's equality in the future:

Gender inequality continues to be a global issue. Currently, there are twelve countries with gender equality represented in their cabinets. Though there have been positive movements towards women's equality, there is still much work to be done. According to Saskia Brechenmacher, "the internal structures of political movements enable women to share their experiences (2020)." South Africa is one of the twelve countries that has gender equality representation in politics.

South Africa continues to strive for women's equality. According to UN Women organization, "For the next five years, South Africa commits

to focus on: equal representation and women's empowerment, women's health and ending violence against women." South Africa's legislation has been able to focus on implementing the Promotion of Equality and Prevention of Unfair Discrimination Act and the Employment Equity Act. South Africa's UN also has a goal to reduce HIV and AIDS and end violence against women by 2030 (South Africa). I am personally excited and look forward to staying "woke" and empowered by the women activists in South Africa. I have hope that one day my country can have women break gender roles and have more equality, especially when it comes to politics.



UN Women (Source: Ryan Brown/Inclusive Peace.org)

Lesson Plan Idea

Grades 8-12

- Have students research percentages of women in political positions throughout the world and have students compare the top fifteen countries.
- not their own (United States.)
- Students can come up with ideas on how to bridge the gap of women equality in their own country. Students can take their ideas and use research to prove why this would work, and present to class.
- their position to help other women.

• Students will continue their research and find out why women have reached equality in politics in other countries, and

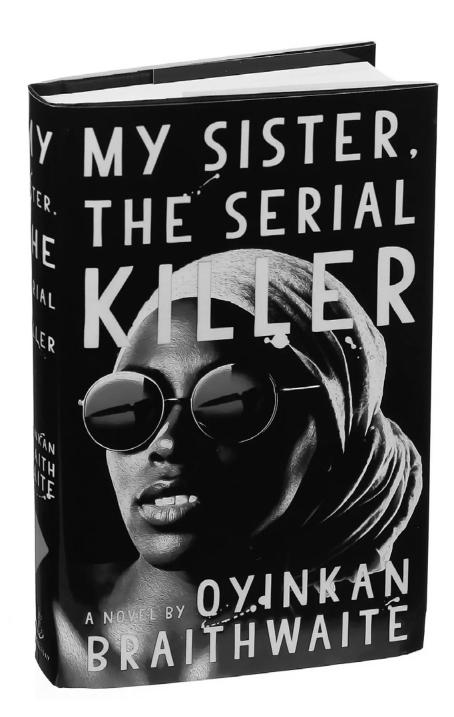
• Students can choose one famous female that has reached a political position in the world, and then was able to help use

Angela Jones **AFRICAN WOMEN WRITERS**

My first introduction to the writings of African women was the book "My Sister, the Serial Killer". Reading through the first few pages grew my interest, upon finishing the book I was hooked. I poured through online searches and revealed a plethora of books written by African women. The stories told by these women are filled with rich history and culture of the continent of Africa. Their stories reveal the importance of family, the hierarchy of the family dynamic, and their close and often turbulent relationships with the outside world.

Although most of the women were born on the continent of Africa, some were raised in other parts of the world. This dual upbringing allows them to compare and contrast their lives and the lives of others living in other societies that can sometimes be as different as night and day and on another level, very similar. The way they integrate the rich African culture into their writing is uplifting, informative, and enlightening.

What I learned from reading books written by African women is that Africa is so much more than just a continent. Africa is rich with stories about family, love, relationships, problems, consequences, and everyday life told from the perspective of African women. I will discuss three of these women in this article: Petina Gappah, Tomi Adeyemi and Chimamanda Ngozi Adichie. Two of the women, Gappah and Adichie were born in Africa while Adeyemi was born outside the continent.



"My Sister, the Serial Killer" (Source: Sonny Figueroa/The New York Times)



Petina Gappah. (Source: Cynthia R. Matonhodze/The



Tomi Adeyemi (Source: Elena Seibert)



Chimamanda Ngozi (Source: Christophe Archambault/

Neck. and Americana.

All these women are accomplished writers in their own way. They have won numerous awards in the literary world. They each bring a richness of storytelling to each of their novels. Incorporating these books and the books of other African women will help students transport themselves to the African continent. It will allow them to see the world from a different point of view. It will open the world of Africa and the nuances of the different counties that make up the African continent.

Petina Gappah

Tomi Adeyemi

Petina Gappah is a Zimbabwean lawyer and writer. She currently resides in Germany. She was raised by her parents in Harare, the capital of Zimbabwe, which was previously a predominantly white area. Her first story was published when she was 14. Although she is a lawyer by trade, she started writing seriously in 2006. "What it means to be a Zimbabwean in recent times" is how she described her first book of short stories "An Elegy for Easterly." It is a collection of short stories on life in Zimbabwe. She provides a storyline that reveals many different facets of Zimbabwe. Heather Hewett's review of Gappah's writing states that "Despite the assortment of writing styles, tone, structure, and sensibilities-differences that can feel jarring at times-certain thematic convergences surface from the collection as a whole." Gappah's other works include The Book of Memory, Rotten Row, Out of Darkness, and Shining Light.

Tomi Adeyemi is the only American born writer on this list. Although she was born in the United States, she was raised in a strict Nigerian way by her Nigerian born parents. She knew very little about Nigeria because her parents being first-generation immigrants wanted their children to assimilate into the new culture. Tomi wrote her first story when she was five. But writing was not her first profession. She worked at a film production company. She decided to reduce her hours so that she could write a book. Adeyemi says, "I'm first-generation Nigerian so I came out of my mother's womb and I was supposed to be a doctor, a lawyer or engineer, and I was like 'oh hey, I'm quitting my very well-paying job at a very stable company that has many future job opportunities for me' ... I'm so lucky that my parents were like, 'obviously we're not crazy about this but we love you'." Tomi's books include Children of Blood and Bone and the follow-up Children of Vengeance and Virtue. A third yet unnamed novel will round out the trilogy. Currently Children of Blood and Bone has been made into a movie.

Chimamanda Ngozi Adichie

Chimamanda Ngozi Adichie was born on 15 September 1977 in Enugu, Nigeria, to Igbo parents, Grace Ifeoma and James Nwove Adichie. Her father was a professor and her mother the registrar at the same institution. She has five siblings. Chimamanda received her formal education in both Nigeria and the United States. Chimamanda's take on writing can be heard in the Ted Talk "The Danger of a Single Story" It helps students understand writing stories through many different lenses. It shows the importance of doing the research to ensure you are not telling half of the story or using references that are inaccurate. Everyone has a story to tell from the individual's point of view, but you must include all aspects of the story and not just one single angle. Chimamanda's books include Purple Hibiscus, Half of a Yellow Sun, The Thing Around Your

GLOBALIZATION AND INTERCONNECTIVITY: COLTAN IN THE DEMOCRATIC REPUBLIC OF CONGO, IT'S HIDDEN COST AND DEVELOPMENT

Introduction

Every year students recommend that I upgrade my cell phone to the latest device because I am missing out on facial recognition or some great augmented reality app. My response, since discovering a vital point in the cellular supply chain, has become more focused on identifying a connection between the phone and the Democratic Republic of Congo. I tell my students that the new cell phone is possible because there is someone making pennies on a dollar over in the Democratic Republic of Congo digging for *coltan*, a necessary mineral found in the cell phone battery I receive the same puzzled look, so I tell the students to look it up right there and the responses are amazing because they had no idea that we are interconnected with a country in Africa, but the proof is in their pocket.

We have been moving towards a more global society and the Covid 19 pandemic, complete with its delay in the supply chain, increased food prices and delayed shipping of finished goods from semi-periphery countries, are lessons on interconnectivity and globalization in development. The Democratic Republic of Congo (DRC) is a vital part in the supply chain of most electronic devices that are being utilized in the world, but it requires a deeper understanding of the effects of the trade of coltan on the communities that mine it, the lack of corporate investment back into these areas, and the responsibility the global community shares to make the trade fair and equitable for the country that supplies this mineral that is vital for the technological development of the world. The largest consumers of coltan are Germany, the United States, UK, Japan, and China.

What is Coltan?

Coltan or columbite tantalite is an ore mined all over the world. It is also one of the key ingredients found in many of the technological products that we use daily such as cell phone batteries, GPS, Automatic Brake Systems (ABS), hearing aids, pacemakers and more. The Democratic Republic of Congo or DRC is rich in resources to include copper, cobalt, zinc, gold, diamonds, oil, and coltan to name a few. In 2019, 40% of the world's coltan was produced in the DRC. There are also surface deposits that are mined by artisan and small-scale miners. Despite its rich resources, the DRC ranks number 7 of the poorest countries based on the Gross National Income (GNI).

Historical Background

The DRC has been politically unstable since its independence from Belgium in the 1960s. The United States and Belgium sponsored assassination of Prime Minister Patrice Lumumba in the 60s due to Western fears of him possessing communist sympathies, the Western desire to keep the rich natural resources from falling into the hands of the communists during the Cold War, and Lumumba's desire to see those resources be used to improve the lives of the people, did not lend itself to a successful move towards independence.

In 1965 Mobutu Sese Seko seized power over the country as an opulent dictator who fostered corruption and left the country as one of the poorest at the time he was overthrown by Laurent Kabila in 1996. Joseph Kabila, son and successor of Laurent Kabila, exacerbated issues with his refusal to give up his seat after the end of two terms, election uncertainty, and internal wars. He crushed any opposition to his regime and most of the large-scale violence took place in the Eastern part of the Congo where most of the coltan mines are located. As a result, *coltan* is considered a conflict mineral.

Reforms in the Supply Chain Business

Several reforms have been put

into place on the international level to understand the origin of the coltan mined in the DRC, such as the Better Sourcing Program (BSP) certification program as well as the Dodd Frank Act, also known as Obama's Law. Section 1502 of the Dodd Frank Act requires US companies trading on the US securities exchanges to determine the origin of the *coltan* that they receive from the DRC and they must disclose if it is from conflict regions. These companies are also required to report this information to the SEC annually. The ITSCI assisted in bringing buyers back to the Congo because it can trace each sack of *coltan* back to the mine it came from by tagging it. Fees are as high as 5% in the trade which is one of the reasons that the Better Sourcing Program has grown.



Worker Conditions, Expenditures and Quality of Life

When *coltan* is mined by artisan and small-scale miners, they work in terrible conditions. They normally work in groups of 6-8 miners overseen by team leaders. The team leaders report to a pit chief who either reports to the owner or a hired manager.

Each level of the hierarchy is paid for their contribution to the effort. There is no benchmark price for *coltan* because it is sold in private unregulated markets. Transportation costs associated are high because of the location of the mines. Most are in areas with poor roads. Shipping costs cut into profits as well which eventually trickle down to the actual miners.

Even though the laws and reforms were aimed to create corporate accountability, they have had unintended consequences in the region. The DRC is no closer to peace and the violence has spread into the south and western part of the country. The Congolese people have faced internal displacement into other countries such as Angola. Once the law was passed, mines were closed, and thousands of artisan workers were left

unemployed because some military groups controlled mines. In a country where 73% of the region lives below 1.90 USD/day, artisan miners are making between 3.2 USD/day to 4.4 USD/day. When mines close families are affected.

Household expenditures can be expensive and according to the Fairphone report and based on UNICEF MEB, food costs on average 82.30 in USD per month for a household of 5 persons. The diet consists of manioc, sorghum, and maize, vegetables, cooking oil and salt. Household rent and living expenses can run anywhere from 4.8 to 14.8 USD. The report indicates that roughly 76% of the miners report no rent payment. At times mine cooperatives have covered the cost of the living expenses and food. Other expenditures include household items, water, and school materials which cost 44.71 in USD on average per month.

Access to reliable healthcare is a concern among UNICEF and miners living on mining sites live farther away from health centers. Miners often treat and prevent malaria which includes

Tantalite ore, Coltan ore, Tantalum ore. (Source: Ecplaza)

the cost of pills and mosquito nets. It is also believed that the estimated expenditure may be lower than the actual need because of self-medication, other methods of pain management, and curbed spending on those health-related needs. The average expenditure reported was 19.54 in USD per month.

Miners have needs such as work tools, leisure activity, and savings. The report indicates that 69% of the miners have no savings and most that are in debt are so because of mining activities. The bottom line is miners need money to function in their daily lives and that cost on average is 202.02 USD per month in a household of 5.

Mining is one of the higher paying jobs in the region, but our cell phones are one of the most expensive pieces of electronic equipment that we possess outside of our vehicles. The average price for the base iPhone 12 model is \$799 per phone. The persons who mine the mineral that is an important part of the technology necessary for cell phones cannot afford to purchase the product. In Wallerstein's World Systems Theory, periphery countries such as the DRC supply raw materials to

semi-periphery countries (ie. China) where they manufacture consumer goods at low cost in Special Economic Zones (SEZs). These goods are then shipped to Core countries such as the United States and Japan to be sold to consumers at a higher rate. Corporations constantly seek ways to minimize costs in the supply chain to keep the excess and add it to the bottom line.

Countries that operate in the primary sector of the economy, such as the DRC, need assistance to become as rich as the resources that they provide. US companies are being held accountable through the Dodd Frank Act, but accountability and reporting for the purchase of conflict minerals stops short of necessary humanitarian efforts to improve the quality of life for miners, transparency in coltan trading price, and protections for those human rights workers.

The United Nations Sustainability Development Goals include responsible consumption and production, no poverty, and reduced inequality. The DRC, a member of the UN, will need assistance and partnership to uplift communities and improve development overall and there are some in the country that are calling attention to these needs. Aliou Diouf recently wrote an opinion piece in La Tribune Afrique where he called for a change in the management of natural resources in the DRC:

"My country is being systematically looted with the complicity of people claiming to be our leaders. Looted for their power, their wealth, and their glory. Looted at the expense of millions of innocent men, women and children abandoned in extreme poverty. While the profits from our minerals end up in the pockets of a predatory oligarchy."

Corporations that benefit from the receipt of raw materials for their product should share some of the responsibility in creating opportunities for a better life for the people of the Congo. Diouf called for corporations



Coltan or columbite tantalite is an ore mined all over the world. It is one of the key ingredients found in many of the technological products such as cell phone batteries, GPS, Automatic Brake Systems (ABS), hearing aids, pacemakers and more. Much of this product is mined in the Democratic Republic of Congo.

education on the supply chain and the environmental as well as human impact of our consumerism is necessary to bring transparency in not only the origin of *coltan*, but of the conditions and wages of the artisan miners.

Globalization in industry has connected the world at unprecedented rates and consumers should understand the impact of their purchase decisions and the human cost of the luxury items we consume. Students should understand the interconnectivity that the entire world

to have social responsibility. Consumer shares with countries in Africa such as the DRC, because these resource rich countries possess the key to many technological advances that help keep us connected virtually.

Lesson Plan

For AP Human Geography or Human Geography

Coltan or columbite tantalite is a substance used in cell phones.

- other sectors that operate in that country.

- profile, Dependency ratio, Economic sector
- Complete an interactive map activity on the DRC and the location of mining activity.



• Economic Sectors - Choose a country in Africa and research the raw materials that are supplied to the world as well as the

• World Systems Theory -Create an infographic of the global supply chain and trace coltan from mines to the end user. • UN Sustainability Goals- Students can research Mini Ted Talks on a sustainability goal using an African country. • Research the DRC and create a one page that provides details on the country's demographics, GDP/GNP, Wallerstein's

A PARALLELED HISTORY OF INJUSTICE IN SOUTH AFRICA AND THE UNITED STATES

South Africa and the United States share a similar origin and history. Both South Africa and the United States were settled by Europeans around the same time, although they were settled for different reasons. Both countries suffered slavery at the hands of colonizers. South Africa and the United States experienced segregation and discrimination. And both South Africa and the United States had movements to fight against this injustice. Their histories are rich with people who stood up to injustice and fought back to make a difference.

European Contact

South Africa's first encounter with Europeans was around 1488 when it was used as a way station to service ships sailing around the southern coast of Africa. Jan Van Riebeeck arrived in 1652 intending to use the area as a ship-servicing area, but wanted to earn back good graces and pushed to make it a permanent settlement (Orten, 1988). The Dutch had settled South Africa with plans of using it as a port to service their ships and to enhance trade, but it was quickly exploited. The Dutch emigrated enslaved people



The South African government imposed pass laws to restrict Black Africans' movements. Women and men protested thes laws and sometimes they were arrested. On August 9, 1956, nearly 20,000 women across South Africa protested against apartheid-era pass laws. On August 9, 1956, nearly 20,000 women across South Africa protested against apartheid-era pass laws. (Source: peoplesdispatch.com)

from Indonesia to work the farmland, but later used the native population for this task. The British eventually came in and took over in 1910 (Zinkel, 2019). The British initiated segregation between the minority white population and the majority non-white population. This began the long history of discrimination against the non-white population in South Africa.

North America experienced Europeans in 1492 when explorers and conquistadors "discovered" the land. The Europeans claimed the land as their own and began to exploit the resources. Much of the native population was wiped out due to their lack of immunity to disease brought by the Europeans. Later migrants to the United States fled Europe to escape religious persecution. These settlers used indentured servants from Europe as labor, but eventually that source dried up and they had to look at alternate options. Thus began the Trans-Atlantic Slave Trade where over 12.5 million Africans were sold onto slave ships and about 11 million survived becoming enslaved in the Americas (Transatlantic Slave Trade).

South Africa

Europeans started to separate the minority white population of South Africa from the majority non-white population. Several laws were passed that limited the non-white population, including the Mines and Works Act in 1911 which restricted employment of non-whites to lower paying jobs, and the Native Land Act in 1913, which

established reservations for non-whites. Afrikaaner nationalists didn't like the British or their rules and formed the National Party in 1914. The NP slowly gained power. They were fiercely nationalistic. They eventually gained power which led to apartheid. Nonwhites were given "passes" under the "Pass Laws" which identified their ethnicity. Non-whites would have to present these passes and were often restricted from entering certain establishments. (Zinkel, 2019)

The Group Areas Act of 1950 legally allowed the government to restrict where non-whites settled and lived. It was designed to eliminate mixed race neighborhoods in favor of segregation. According to Zinkel, the Group Areas Act broke up families, friends, and communities. The use of legislation to control the lives of Indians, Coloreds, and Africans made it impossible for non-whites to gain equality.

Education was also used to subjugate non-whites in South Africa. Non-whites had poorer facilities, more poorly trained teachers, fewer expenditures per student, and a different style of education. Students were taught an education to "convert or dislocate students from valuing their African traditions" (Walker & Archung, 2013). Education was designed to promote the minority whites into positions of power and leadership.

The United States

Upon arrival, the Europeans took advantage of all the resources in the Americas, including the people. Most of the Native population was wiped out due to their lack of immunity to certain diseases prevalent among the Europeans. The Europeans had used Native Americans and white indentured servants, but it wasn't enough. The Dutch East India Trading Company brought Africans to the Americas to work as enslaved people. Enslavement continued for 366 years until it was outlawed in 1865 (Zinkel,



(Source: FILE)

2019).

There were many ways that African Americans were discriminated against in the United States. Even after the end of slavery, there were a set of laws that kept African Americans from gaining equality. Jim Crow Laws, named after the minstrel show called "Jump, Jim Crow," were used to legally segregate businesses and transportation. These laws were upheld by the Supreme Court case Plessy v. Ferguson which declared that business and transportation could be "separate but equal."

Education in the United States did not offer the same opportunities to African Americans as it did to whites. According to Walker & Archung, separate schools for African Americans, con- National Congress (ANC). They sisting of poorer facilities, fewer books, and little to no transportation led to their miseducation. It wasn't until 1954, warfare, terrorism, and violent pro-Brown v. Board of Education, where separate facilities were deemed unequal and illegal. Education was geared at teaching the black population that "their position was due to the natural process of evolution" (Walker & Archung, 2013).

In 1956 a historic march took place in South Africa. Women of all races protested the racist restrictive pass laws

Black students were taught how to do manual labor over academics. This reinforced their "second class citizenship" (Walker & Archung, 2013).

Even after desegregation in the United States, "black students are more likely to be disciplined, suspended, and placed in Special Education" (Walker & Arghung, 2013).

Movements

Despite the segregation and discrimination that non-whites felt in both South Africa and the United States, there were also examples of rebellion and revolution. In South Africa, there was internal resistance against the National Party created by the African used many tactics to fight against the injustice of the ruling party, i.e. guerilla tests. Nelson Mandela was a member and leader of the ANC. He worked tirelessly for the black African population in South Africa and was arrested/ jailed for his efforts. Nelson Mandela "was of key importance in negotiat-

ing the freedom and equality of all South Africans. He then went on to become the first democratically elected President of South Africa" (Nelson Mandela: Father of the Nation). Mandela was inspired by Gandhi, but eventually felt that violence was the way to make change. Nelson Mandela wrote letters from jail and gave an historic speech titled "I Am Ready to Die" which inspired people to continue the fight for equality.

In the United States, people fought back against segregation and discrimination. Martin Luther King Jr. was an activist that pushed for change for the black community. He led peaceful protests, a bus boycott, the March on Washington, and delivered his "I Have a Dream" speech that inspired people to not give up on the hopes of being "free at last."

The Fight Is Not Over. South Africa has made efforts to continue to work for equality. They established the Truth and Reconciliation Commission in 1995 to try to remedy some of the ills that apartheid caused (Zinkel, 2019). The United States had at this point made no such efforts. As of 1994, non-white South Africans held the majority in Parliament, while in the U.S., African Americans only represented 9.4% of Congress (Zinkel, 2019). People like Nelson Mandela and Martin Luther King Jr. have inspired people to work for equality, but with a past as hurtful as that of South Africa and the United States, it is an uphill battle that needs more participation. Doing small things with great intention is a good starting point to fighting injustice.



Winnie Mandela and Nelson Mandela met then Atlanta Mayor, Maynard Jackson (C) and Coretta Scott king, widow of slain civil rights leader Dr. Martin Luther King, Jr. after Nelson was release from jail in 1990. (Source: Bettmann/Getty)

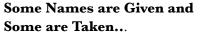


Rosa Parks greets Winnie Mandela and Nelson Mandela when they visited the United States after Nelson's release from prison. (Source: BeaconBroadside.com)

Kendriana Drayton-Miller

AFRICAN NAMES: COMPARATIVE ACTIVISM ON RECLAIMING IDENTITY AND GEOGRAPHICAL SPACES

Africa is a continent, not a single country as that idea is often misunderstood through the echoes of overgeneralization but is the second largest continent in the world with 54 countries. Each country is unique and home to a variety of ethnicities with individual practices) now "free" from colonial rule. Yet, the impact of colonization directly and historically connect to many of the contemporary cultural customs ranging from the acknowledgement of naming practices (and the lack thereof) to the recognition of natural wonders and that of dedicated memorials.



For many, as we draw our first breath our names are decided on and given to us by our parents. In some communities throughout West Africa including Ghana, it is common for an individual to have several names including a "given" name or Day-Name. In the article, Everything You Need to Know About the Ghanaian Tradition of Day Names, Kwame Aidioo, explores the background of Ghanaian and West African naming systems as well as the connections to communal traditions. "The naming system of the Akan people is as distinct as that which elders in Togo (the Ewe people), the Ga people, Benin (the Fon people), and the African diaspora pass on to toddlers...Aside the fact that day names are a simple means for commonality, they are easy conversation starters and icebreakers". (Aidoo) Introductions and commonalities based on a shared



A naming ceremony in Nigeria. (Source: Facts.ng)

day, can help individuals identify when others were born but can also reinforce a person's sense of self in relation to attributes of character.

Everyday has a purpose, and in practicing a tint of mindfulness to what each day means could bring added connections to our daily lives. Aidoo details meanings of Day-Names of the Ashanti:

the universe');

Monday-born males are named Kwadwo or Kojo, females - Adjoa or Adwoa (meaning 'associated with peace');

Tuesday-born males are named Kwabena or Kobi, females are Abena (meaning 'associated with the ocean');

Sunday-born males and females are named Kwasi or Kwesi and Akosua respectively (meaning 'associated with

Wednesday-born males are named Kwaku or Kweku, females are Akua (meaning 'associated with spider/Ananse');

Thursday-born males are named Yaw, females are named Yaa (meaning 'associated with the earth');

Friday-born males are named Kofi, females are named Afia or Afua (meaning 'associated with fertility')

Saturday-born males are named Kwame, females are named Ama (meaning 'associated with God').

During colonialism, the communal naming practices experienced changes in most African societies. "In colonial Kenya, Christian names came to be seen as official, a sign of being educated, no longer a heathen, saved from one's primitive nature," (Kimeria). With the presence of new



"History, like beauty, depends largely on the beholder, so when you read that, for example, David Livingstone discovered the Victoria Falls, you might be forgiven for thinking that there was nobody around the Falls until Livingstone arrived on the scene." - Archbishop Desmond Tutu

An image of George Floyd is projected on a screen in front of the statue of Confederate General Robert E. Lee on Monument Avenue on July 28, 2020, in Richmond, Va. Change.org and the George Floyd Foundation officially launched "A Monumental Change: The George Floyd Hologram Memorial Project" in Richmond, the capital of the Confederacy during the Civil War. (Source: Steve Helber/AP)

social workings and the widespread missions of religious conversion, many Africans experienced generational and intergenerational impacts in their immediate lives as well as within their countries. With the gradual suppression of these once vested practices, one can find themselves and communities to be more individual and isolated.

Colonial Impacts on Names of Geographical Locations

Mosi-Oa-Tunya, meaning the Smoke that Thunders, the original name of the falls in Zambia was named Victoria Falls during colonialism.

"History, like beauty, depends largely on the beholder, so when you read that, for example, David Livingstone discovered the Victoria Falls, you might be forgiven for thinking that there was nobody around the Falls until Livingstone arrived on the scene." - Archbishop Desmond Tutu

More than a label, names are how we, as people, make connections. Names are how we identify places, other people, as well as locate geographical landmarks. "Colonialism played a very major role in the deformation of African indigenous place-names" (Uluocha, p.184). Even still, these colonial impacts have historical framings that can be seen in the contemporary present. If a world traveler visited your classroom and asked students about Niagara Falls, how many students would identify this place? Then if they were to follow up and ask who could identify Mosi oa-Tunya, by comparison, how many students would identify this place?

It is likely that many who could identify, the Niagara Falls, may have more of a difficulty in identifying, Mosi oa-Tunya, because it is more widely known by another name, Victoria Falls- hastily bestowed by a foreigner

on a mission under the loathed ideals of colonialism. When this missionary, David Livingstone, saw the falls for the first time in 1848, he then named it after the Queen of Britain, Queen Victoria. An action, a name, a declaration from almost two hundred years ago, is still tied to this natural wonder. " In comparison, Victoria Falls is home to the world's largest sheet of falling water and is almost double the height of Niagara Falls and half a kilometer wider," (Culley). If Niagara Falls registers as a "must see" then, Victoria Falls/Mosi oa-Tunya, should surely be at the top of the list. The Falls is listed as one of the Seven Wonders of the World.

Names: A Monumental Movement

In most recent years there has been a push to acknowledge seemingly unnoted figures, coupled with advocacy for the removal of

Confederate statues and name plaques in the United States. "More than 90 Confederate monuments were taken down or moved from public spaces in 2020 following the death of George Floyd, according to new data from the Southern Poverty Law Center," (Yancey-Bragg). Confederate monuments are being removed, public parks and school campuses are being renamed from these once revered leaders to acknowledge more individuals of the African diaspora whose actions also lead to altering historical impacts. Yet, some places throughout the nation and within our global community remain permanent plaque displays with names and statutes of historical figures, who led many in costly ideals of entitlement, colonialism, enslavement, and subjugation.

There is a mirroring in this contemporary renaming or



led resistance against British imperialism. (Gershon)



A newly unveiled statue in Zimbabwe's capital honors Spiritual Medium, Mbuya Nehanda, an icon of resistance, who

rededication process, between the United states and countries such as Zimbabwe and Zambia. There is a push for colonial names to be taken down and a pull for people to pay homage to the names and displays of local leaders and movement makers.

One cannot currently come to a decision of renaming or rededicating a self name, standing monument or geographical location such as, Victoria Falls, without discussing the significance a name carries and reflectively acknowledging actions of the past that impact on the present. It is while taking note of the power in truth, history, and recognition that we not only connect but thrive in a constantly changing, contemporary world.



Statue of Queen Nzinga of Angola (Source: AfricaAccessReview.org)

Lesson Plan

Name This Place

- Introduce students to the Seven Wonders of the World-Students should:
- Take notes on different geographical locations and features
- Design a flyer or poster (with an image and information from student notes) detailing specifics about one of the seven wonders:
- The Seven Wonders can be assigned to student groups or given as an independent project.

Guiding/discussion questions:

Before presenting-

- Ask: which natural wonders of the world students are already aware of, or have possibly visited?
- What natural wonders do you (students) think are on the list?

Exit questions-

- Why is the Victoria Falls one of the listed wonders of the world?
- Where is this natural landmark located?
- How many tourists or visitors come to see the natural falls each year ?
- Victoria falls is also known as _____?

2. Victoria Falls / Mosi oa-Tunya: One Place two names

Students will:

- Conduct research and plan a trip to Victoria Falls/Mosi oa-Tunya
- Compare and contrast-
 - Infrastructure leading to access points
 - Tourist amenities: such as hotel and lodging
 - Transportation
 - Comprise trip costs or estimates based on entrances-located in different countries: Zambia and Zimbabwe.
 - Ventures/activities /(Ex: Bungee jumping, safari tours, etc.)
- Final presentations can be in the form of a pamphlet "tripadvisor report", or a digital trip slideshow

3. Names, live on:

Although many individuals may have once been a historical figure, movement maker, revolutionary leader, dignitary ruler, or influential speaker... all of their name(s) may never be displayed on a distinguished building, a commissioned statue or dedicated monument.

In this activity students will:

- Survey existing landmarks and monuments in the United States and a country in Africa such as that of Queen Ana Nzinga (of modern day Angola) or Mbuya Nehanda (of modern day Zimbabwe).
- Schedule a computer lab or Media Center visit (where possible) for students to conduct independent research on historical, local or global figures
- Develop an informational presentation for the statue/monument naming proposal project (students should include a photo of the figure-if possible)
- Construct a written reflection detailing various impacts this person's actions, the positive outcomes this leader or individual had on their community as well as connections to the global stage... Including but not limited to:
- Biographical information: Name of the figure, their place of birth, life span, family and schooling details • Why this individual should be acknowledged
- (identify) how this person made service contributions to society and the local community. • Which day would the statue/monument "unveiling" public ceremony or dedication take place?
- Where would the statute be located?

3. Every day has meaning:

to Know About the Ghanaian Tradition of Day Names (theculturetrip.com)

on the shared day- as an introduction or icebreaker activity.

Groups will:

- Identify similar characteristics or individual attributes that make each day of the week unique.
- Activity can be used during homecoming events or spirit week

All activities can be modified to fit the needs of your classroom (activities can be completed on paper, using arts and crafts, magazine images etc. or the activities can be completed with technological resources- a computer, google docs/slides, Microsoft, Prezi, Flip grid...) and to the learning environment of your classroom/campus to complement the dynamic of your learners.

- Learners will review day and order names (names given based on the day of the week one is born)- Everything You Need
- Students can be grouped by day-names (day of birth) and discuss individual and common personable characteristics based

• Create a visual display (can be created with arts & crafts or virtually with digital designs) based on the day of the week

Introduction

The idea of returning to Africa has lingered in the imaginations of many Africa Americans since their arrival on the shores of America around 400 years ago. In the early twentieth century esteemed black nationalist Marcus Garvey's "back to Africa" ideology resonated with about six million African Americans. Garvey quoted," We see a new Ethiopia, a new Africa, stretching her hands of influence throughout the world, teaching man the way of life and peace, The Way to God." Although this ideology eventually waned among most African Americans by the mid-twentieth century, the "back to Africa" mantra continued to thrive within some Pan-Africanist circles across the United States. By the 1970s, the concept evolved into what is known as root tourism. Root tourism can be defined as a segment of tourism in which tourists have ancestral connections to their vacation destination.

Roots: The Beginning

Roots: The Saga of an American Family, written by Alex Haley, is often noted by historians as the springboard for root tourism in Africa. Published in 1976 the story explores the life of Kunta Kinte and seven generations of his enslaved descendants. Kidnapped from Juffureh, a small village in Gambia, Kunta was brought to America where he lived his life as an enslaved African in Virginia. In January 1977, a television miniseries based on the book aired over eight consecutive evenings and was watched by approximately 130 million Americans. According to the Neilson Cooperation, the final broadcast of the series is noted as being the third most watched telecast of all times. The story of Kunta and his family resonated with African Americans and encapsulated their experiences in the United States. The miniseries also sparked a sense of Black pride among African Americans and the desire to explore their roots in Africa (Clarke). Some decided to begin the exploration in Kunta Kinte's birthplace.

hood is visited annually by scores of tourists. In the mid-1960s, Gambia attracted about 300 visitors. By the early 90s, the country was receiving about 90,000 visitors per year. In 1996, the Minister of Tourism in the Gambia started its first Roots Homecoming Festival. Saihou Omar Taal, cultural consultant for the Gambia stated, "As a group, African Americans spend about \$400 billion a year. So, if we in the Gambia could get just one percent of that, we would be flying high." By 2003 tourism in the Gambia made up approximately 7.8 % of the national GDP (Wright, 2011). In the same year, Kunta Kinte Island, on which Juffureh is located, was noted as a UNESCO World Heritage Site. On the island, visitors see remnants of a former slave dungeon. They may also explore the Gambia Slave Museum. The museum boasts its collection of artifacts dating back to the Transatlantic Slave Trade (Janko, 2018).

Since the airing of *Roots*, Kunta's boy- **DNA Testing**

Memphian Stacy Lurry remembers a time when she knew little about her ancestry. "I knew about my great grandparents on both sides. And I knew my people were sharecroppers and slaves. But really that's it. I really didn't know much more than that." Stacy's tale is not unusual. Like many African Americans, she could only go back one or two generations before coming to the proverbial dead end. Enslaved Africans were considered as property and their names were not recorded in most counties until 1870. This makes it difficult for descendants of in the U.S. to trace their lineage. The onset of DNA testing has played a pivotal role in changing this narrative. Testing companies like AncestryDNA use scientific breakthroughs to help uncover some the mystery surrounding

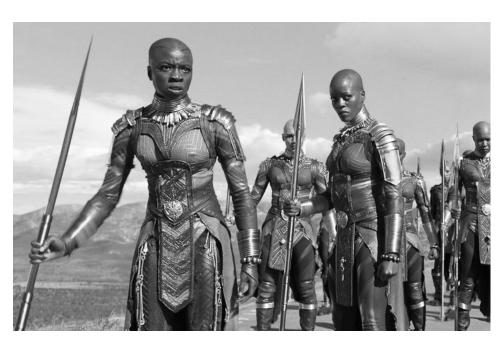


(Source: NCI/Unsplash)

this issue by giving African Americans a comprehensive view of their African ancestry. Ancestry DNA divides Africa into the following groups: North Africa; West Africa including Senegal, Mali, Benin/Togo, Ivory Coast/Ghana, Nigeria; Cameroon/ Congo; Africa South-Central Hunter Gatherers, and Africa Southeastern Bantu. Among Africa Americans, Cameroon/Congo, Nigeria, and Ivory Coast/Ghana are the most common.

African Ancestry is noted among many African Americans as being the best DNA testing company for those of African descent. With over 30,000 genetic samples, the company has the ability to use maternal and paternal mitochondrial DNA to determine ethnicity and present-day country location of the ethnic group. To date, no other testing company has the capability to deliver this level of accuracy and specificity for African Americans. For Stacy's family, African Ancestry has been a blessing. "My sister decided to take the test in 2017. Because we inherited the same DNA from our mom, the results apply to me too. We are Themn people from Sierra Leone. I couldn't believe it. I was so happy when we got the results. I did a lot of research about our roots. We learned about the Koya kingdom. My children know where they're from. It's amazing."

This \$3 billion DNA industry has fueled many African Americans and Afro Carribeans to take a trip to Africa and explore the land of their ancestors. In 2016, online travel aggregator Momondo used Ancestry DNA to jumpstart their African American heritage tourism campaign. Dallin Hatch, spokesperson from Ancestry DNA noted that DNA testing is more affordable and has become very popular among African Americans. "Some [customers] have found and traveled to old family homesteads, or other places indicated in the records. DNA provides the start and records provide the destinations." Evita Robinson, founder of Nomadness Travel Tribe, acknowledged an uptick in African Americans traveling to



("Black Panther" 2018

Africa as a result of DNA testing. "I started the trend in Nomadness where we did the AncestryDNA because people want to find out where they are from. There's definitely more of a pickup for travel to Africa right now and representing it more than safaris (Skift. 2016)." African Ancestry has recently launched the African Ancestry Family Reunions Campaign. Using the slogan, "Now That You Know, It's Time to Go Home", the company has specifically curated birthrate itineraries for members of the African Ancestry community. Currently, itineraries are offered to the following destinations: Burkina Faso, Cameroon, Ghana, Nigeria, Senegal, and Sierra Leone.

Wakanda Forever: The Black **Panther Effect**

The cinematic masterpiece known as Black Panther sparked a newfound interest in Africa. Based on the Marve comic book series bearing the same name, the 2018 film highlighted the splendor and majesty of the continent in ways not previously seen. Costumes designed by award-winning African American designer, Ruth Carter, showcased the beauty of many African cultures. From the *isicolo* donned in the film by Ramonda to the Kente scarf worn by T Challa (Chutel and

Kazeem, 2018), the sheer aesthetics of the feature sparked a since a pride among people of African descent throughout the diaspora. In addition to its ode to African fashion and culture, the movie also highlighted the natural wonders of Africa. Towering mountains and lush savannahs were on full display throughout the movie. *Black* Panther also made a huge splash at the box office. According to Rolling Stone Magazine, Black Panther is the third highest grossing Marvel movie of all time raking in over a billion dollars worldwide (Kreps, 2018).

As a result of its success, Black Panther has become the catalyst that inspired many Africans in the diaspora to reconnect with their roots. Using scenes from different locations in the movie as the backdrop for their online travel guides, vacation companies worked hard to entice African American tourists by curating Wakanda-inspired tours to several countries on the continent. African Travel Inc. offered tours in South Africa, Kenya, and Madagascar. The itineraries ranged from a stroll along the sacred Mandrare River to a safari adventure at the Shamwari Game Reserve. Tourists going to Kenya had the option of visiting Maasai and Kipsigi communities. (Newsdesk, 2018).



Africa for the Africans Tour & Investment is a full service tour operator that organizes tours to Ghana. (Source: Africa for the Africans

Ghana

In 1957 Ghana gained independence from Great Britain. It was during this time that the country's first president, Kwame Nkrumah encouraged African Americans and others from the diaspora to "repatriate" to Ghana. Nkrumah, a pan-Africanist who studied at Lincoln University in Pennsylvania, believed that "returnees" could contribute to the growth and development of the newly independent country. His administration developed the Ministry of Tourism and Diaspora Relations. At the time, the ministry focused mainly on returnees becoming citizens. Today, the focus is on tourism (Benton and Shabazz, 2009). This has led to the development of a profitable and robust tourism industry. Several travel organizations and companies promise to fulfill Nkrumah's dream and "bridge the gap between Africans and African Americans" by helping them explore the sights and sounds of Ghana. One such company is Africa for the Africans Tours and Investment Group or

pany is headed by Bomani Tyhimba and aims to "reconnect Africans in the diaspora to our motherland for repatriation and Pan-Africanism." The Ghana Roots Culture and Repatriation *Tour*, curated by AFTA, is popular among tourists. The itinerary allows them to visit the Cape Coast Castle, a dungeon for enslaved Africans noted as a UNESCO World Heritage Site. Tourists also explore the Abiri Wood Carving Village as well as participate in a naming ceremony.

AFTA. Established in 2006, the com-

Unlike other companies, AFTA touts a business development component. Tourists have opportunities to attend investment workshops led by successful African American repatriates. AFTA has a catalog of promotional You Tube videos featuring highlights from various tours. In one video, tourists in white attire wade their feet in the Atlantic Ocean at Elmina Beach. One traveler stated, "To see so many of my brothers and sisters here. It's

like life changing." She went on to say, "One thing I've always wanted was our people to connect with Africa and for Africa to connect with us."

In 2018, the Ghana Tourism Authority announced that the organization would sponsor The Year of Return, Ghana 2019. According to www.yearofreturn.com, "The Year of Return, Ghana 2019 celebrates the cumulative resilience of all victims of the Transatlantic Slave Trade who were scattered and displaced through the world in North America, South America, the Caribbean, Europe, and Asia." One of the main objectives for the campaign was to promote Ghana as an important tourism destination for African Americans and other diasporans. The Year of Return 2019 was met with great fanfare. Steve Harvey, Samuel L. Jackson, and Idris Elba were some of the celebrities who touched down in Accra and attended commemorative events. By all accounts, The Year of Return, Ghana 2019 was a tremendous success. Inbound airport arrivals increased 26% from the U.S. and 24% from the UK. The campaign generated a total of \$1.9 billion in related activities such as air travel, hotel accommodations, transport fare, and entertainment (Taylor, 2019). Due to the campaign's success, government officials are now planning a new initiative entitled Beyond the Return. Initiative planners want to increase the number of visitors to Ghana from 1 million to 8 million by 2027.

Sierra Leone

African Americans have a long historical connection to Sierra Leone. In the late 1700s, the country was settled by former enslaved Africans who fought for freedom alongside the British in the American Revolutionary War. After slavery was abolished in 1807, the British navy intercepted rogue slave ships and sent the rescued Africans to reside in Sierra Leone (Benton and Shabazz, 2009). In the early 1800s, African Americans began traveling to Sierra Leone as missionaries for various religious organizations. Sierra Leone and African Americans have several ancestral connections as well. The Gullah/Geechee is an African American ethnic group that hails from the sea islands off the coasts of Georgia and South Carolina. There is substantial evidence suggesting that their enslaved ancestors were from ethnic groups in Sierra Leone. In the 1940s, renowned African American linguist, Lorenzo Dow Turner, revealed that many Gullah/Geechee people could recite songs and stories in Mende, the language spoken by the Mende people of Sierra Leone. Decades later, historian Joseph Opala confirmed that all the African texts that the Gullah/Geechee had preserved were in languages spoken in Sierra Leone and along its borders (Opala).

Since the 1980s, the Gullah/ Geechee community has participated in a series of homecomings to Sierra Leone. The first pilgrimage took place in 1989 and included a delegation of Gullah/Geechee community leaders interested in making connections with "kinfolks" in Sierra Leone. The 1997 homecoming spotlighted members of the Moran family of Georgia who preserved a 200-year-old song from a specific Mende village in the country. *The*

2005 Priscilla Homecoming paid homage to the descendants of Priscilla, an enslaved girl who was taken from Sierra Leone to the U.S. in 1756 (Benton and Shabazz, 2009).

In 2006, the Sierra Leone-Gullah Heritage Association was founded. The association eventually became Fambul Tik, a cultural and heritage organization that seeks to preserve heritage between the African diaspora and Sierra Leone. Fambul Tik's vision is to "become a leading heritage tourism company in Sierra Leone by providing roots tours based on accurate history and thereby increase visits by heritage tourists to Sierra Leone, markedly, within 5 years." The association curat ed the 2019 Gullah Homecoming to Sierra *Leone*. The itinerary included a visit to Bunce Island, the site of a British slave castle located in the Sierra Leone River. Also included on the itinerary was a visit to Old Yagala, a fortified town located at the top of a mountain just three miles outside of Kabala Town. It is said that Sierra Leonians would trek up the mountain to evade slave traders. According to the organization's website, Amadu Massally, co-founder of Fambul Tik, believes there is a marked difference between Sierra Leone and other West African countries. "So, while other countries like Senegal

Lesson Plan

Essential question: What can you do to improve your community?

- three countries.
- expressions, etc.)
- 3. Create a brochure that spotlights one tourist attraction in the country highlighted in the power presentation (For example, the Cotton Tree in Freetown, Sierra Leone)
- autobiography chronicling important family events.
- information from the websites, write a comparison essay about the two companies.
- 6. Write an opinion essay explaining preference for either AncestryDNA or 23 and Me
- 7. Read teacher selected, age-appropriate excerpts from a *Black Panther* comic book.
- 8. Students can create their own Wakandas and use that place as the backdrop for their own comic books (May take several days to complete).

and Ghana are claiming that African Americans must look to them for their ancestry, in Sierra Leone the evidence is abundant that real connections exist."

Conclusion

By all accounts, root tourism among African Americans emerged after the airing of the television miniseries Roots in 1977. The onslaught of DNA testing and the success of the movie Black Panther contributed to an increase in this segment of tourism during the 21st century. By leveraging historical and ancestral connections. countries like Ghana and Sierra Leone scored big with African American tourists seeking to "go back home." There is a rumbling among African diasporans. Many are disillusioned by the social injustice they experience in the Americas, Europe, and Asia. They see the whole of Africa as their refuge, their quiet place, their homeland. Therefore, it is highly probable that root tourism on the Continent will continue to thrive.

1. Read information texts about Gambia, Ghana, and Sierra Leone. Use additional online resources to research one of the 2. Create a power point presentation about the country. Include cultural information (language, religious practices, artistic 4. Read an excerpt from Roots: The Saga of An American Family. They can research their own family history and write a brief 5. Visit the websites of AncestryDNA and 23 and Me. Using a Venn Diagram, compare/contrast the two companies. Using

AFRICAN AT HEART: HOW RACE LITERACY CAN AID OUR STUDENTS AND HEAL OUR NATION

A people without the knowledge of their past history, origin and culture is like a tree without roots. -Marcus Garvey

In April of 1956, news of war in Algeria filled the newspapers causing increased clamor among college students in France that their country needed to begin the process of decolonization. A group of students of African descent at a Catholic university did their best to sway church opinion from the inside (Foster, 2015). They wrote, "We, the Catholic students of Black Africa in France, reaffirm our desire to stay simultaneously entirely Christian and entirely African; we cannot, in any circumstances or under any kind of pressure, choose between these two loyalties ('Declaration des etudiantes catholiques d'Africa noire en France', 1956)." In many ways, this is a powerful reflection of anyone who feels like their multiple identities are at war with each other. These students were committed to their faith and their African origins, refusing to allow anyone to separate the two. In many ways, they are a model of courage and conviction; an example for others to follow. This conflict exploded into an uproar in the light of the senseless killing of George Floyd. Such events beget questions that we as teachers need to consider. Could our students, like those in France, find the courage to stand up for both their African and American origins, and, if so, could they find it a matter of personal pride rather than shame?

Some of the things that could bring shame to a student are beyond the scope of teachers to address in the classroom. In his book The Color of Law, historian Richard Rothstein demonstrates the way the Fifth, Thirteenth and Fourteenth Amendments were systematically subverted in ways that forced African Americans into substandard housing and low paying jobs, thereby setting the stage for the modern ghetto (Rothstein, 2018). While all of us, regardless of color, should fight such inequalities in every way we can, such efforts would seldom be appropriate in the classroom.

Instead, we have to deal with the students in front of us, many of whom feel that school was not meant for them, that school, like the legal system, and queens, that they were basket

was built with white people in mind, providing opportunities and advancements that simply are not available to people of color. Rather than seeing education as a way out of poverty and a way for them to influence the halls of power, they see it as an unfair game they were meant to lose.

How then can we assist our students in changing this attitude and encourage them to face the challenges ahead? A clue may come from Milagros Phillips who argues for what she calls "race literacy." She says that history books do not mention that the people who were kidnapped "were actually warriors, that they were kings



The Algerian War of Independence in 1954. (Source: Marc Riboud / Jacobin /@jacobin Twitter)

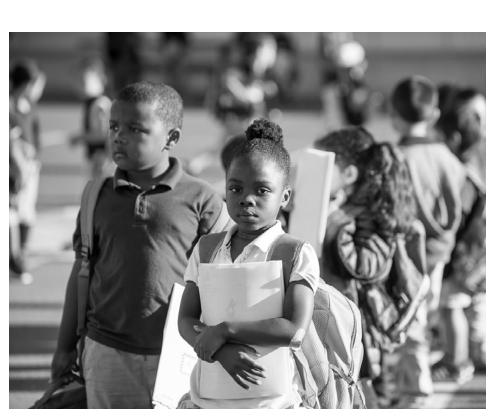
weavers, astronomers, architects, that a lot of them were highly educated, that the first university in the world was the University of Timbuktu." She goes on to argue that this kind of information seems to have been left out of our history books, leaving students of African descent identifying with the victims in the story, even as their white classmates identify with the slaveowners (Phillips, 2018). If this is the case, is there any wonder why minority students might feel like school was not meant for them?

Is it possible that teaching African roots and the impact of African thinking on the rest of the world could restore confidence in our students to the point where they began to see themselves as change agents, just as those African students in France did more than sixty years ago?

One of the things we will need to do is insist on textbooks that share a balanced view of history. As Maryland principal, Alana Murray, has stated, "Textbooks are supposed to teach us a common set of facts about who we are as Americans ... and what stories are key to our democracy (Murray, 2018)." Yet many textbooks, through omissions and downright errors, paint a sugarcoated picture of our history, often emphasizing the compassion of the slave owners while downplaying the unspeakable cruelty endured by the enslaved (Greenlee, 2019).

Yet textbooks alone will not cure the problem. Our minority students need to know enough of their history to find a sense of pride in who they are and the kind of blood that flows through their veins. We need to teach them how people just like them have had a profound influence on our world and indeed on American culture. If there is any hope of students buying into their own education, then we are going to have to show them how those who have gone before changed our world for the better.

A key point to be made with our



All Oakland children deserve access to quality instruction in supportive, safe and loving learning environments. (Source: Stephanie Secrest / Kenneth Rainin Foundation)

students is that African history does not begin with slavery. Africa has a long and storied history of intellectual pursuits and scientific breakthroughs. Not only that, Africans were part of the spirit of discovery that consumed public interest in the 15th century. A publication on Immigration presented by the Library of Congress puts it this way: "When Africans first came to the New World, they came of their own free will, and they arrived at virtually the same moment as the first Europeans (Library of Congress)." The publication goes on to describe the "brutal system of human exploitation" with "harshness seldom surpassed in recent human history (Library of Congress)."

We cheat our students when we fail to recognize the myriad contributions of people of color, especially those of African descent. Many textbooks focus so much of their attention on European culture that students come to see anything originating outside Europe as being little more than a footnote in history rather than recognizing things like the great library of

Alexandria, the Sankore University in Timbuktu, the pyramids of Giza, as well as contributions in math, astronomy, metallurgy, architecture, medicine, navigation and more. As Mutabaruka said, "Slavery isn't African history; it interrupted African history (Mutabaruka, 2005)." A Eurocentric education may be "the way it's always been done," but it fails on many levels at a time when globalization is rising as a significant force and racism in our own country continues to divide. Everyone loses when we fail to teach these things, not just African Americans.

So, what should we be teaching and how? One of the things teachers know is that we learn best through stories. Harvard researcher, Vanessa Boris tells us, "Storytelling forges connections among people, and between people and ideas. Stories convey the culture, history, and values that unite people. When it comes to our countries, our communities, and our families, we understand intuitively that the stories we hold in common are an important part of the ties that bind (Boris, 2017)."

Not only is Boris' statement a subtle indictment of inaccurate history, it also offers hope that shared stories may be able to assist us in our search for healing and equity. With that in mind, let us look at just a few stories that we might want to teach in the classroom. Please keep in mind that these are but a few with many, many more a simple Google search away.

Our first African American president had his official portrait, done by pop-art darling, Kehinde Wiley in 2018.. Wiley, ironically, was best known for taking young people off the streets of Harlem and painting them in poses used by the art masters of a bygone era. In a sense, he was saying, "These marginalized people are every bit as relevant today as the royal patrons of the classical era." Wiley's paintings struck a nerve with our former president, which is why he chose him to commemorate his time in office. Likewise, Michelle Obama chose African American artist Amy Sherald to paint her portrait. Sherald's portrayal of the former first lady is simple and elegant, though many criticized her for painting her skin in shades of grey rather than skin tones. When asked why she did this, her only response was, "Some people like their poetry to rhyme. Some don't." Sherald is actually well-known for painting flat skin tones in an attempt to downplay the role of race. She wanted everyone to be able to relate to the first lady, not for her race, but for who she was. While Wiley and Sherald were the first African-American artists to do presidential portraits, they are certainly not alone in advancing art from an African perspective (Kazanjian, 2019).

Film

As a boy, Gordon Parks was told he could grow up to be either a waiter or a porter. He worked both of those jobs until he was able to buy a second hand camera and began working for a government agency documenting the plight of African Americans in Washington, DC (McBroom, 2019).

Later, he earned notoriety as a musician, writer, and film maker. He frequently turned his talents toward assisting the burgeoning Civil Rights Movement from the 1940s to the 1970s. His lens was often focused on poverty and the plight of African Americans, with an occasional jaunt into the world of fashion. He may be best known as the director of hit movies like "The Learning Tree," "Shaft," and "Malcolm X." Clearly, he was a man of incredible talent and influence who ignored the naysayers of his early life.

Unsung heroes

Art Burton is a professor at a small college in Illinois who likes to write about African Americans in the days of the Western Frontier (The Sunday Telegraph, 2013). Some years ago, he stumbled on the remarkable story of a man named Bass Reeves; who was formerly enslaved and hid in Indian Territory until he was emancipated, then joined the Marshal Service when it was discovered he could speak some of the Indian languages. He was also very good with a gun. In his book, Burton makes the case that it is very probable that Reeves was the inspiration for the now famous stories of "The Lone Ranger (Burton, 2008)."

Mathematics

In the 1960s, a small boy from Akure, Nigeria, had to drop out of school because his parents were no longer financially able to send him to school. Nevertheless, he continued to read at the local library until he had essentially read every book they had. One of the books proposed the idea of assembling 64,000 people all over the world to use their math skills to predict the weather. Sixty-five years later, that boy, now with a PhD. from the university of Michigan, assembled, not people, but computers to do the calculations. His system, now known as "parallel processing," was able to make 3.1 billion calculations in one

second and has been credited as an important milestone in the invention of the Internet. (What he calls "the eighth continent.") Two years later, Philip Emeagwali won the Gordon Bell Award for his contributions to computer science; consider "the Nobel prize in electronics (Connors, 1996)." His story is astonishing when you consider all the hardships he had to endure, including being conscripted into the Biafran army for a time. Yet his passion for learning and his willingness to work hard propelled him to a place where he could make a profound impact on our society.

While our students need to hear stories like Emeagwali's, his success raises an even more important question; how many of those seated in front of us each day have the same potential but are simply not being given what they need to succeed. Certainly, there are huge challenges for teachers in this age of political correctness and standardized testing, but we must find ways to overcome the everyday obstacles so we can help the students we serve.

True Liberation

Milagros Phillips, mentioned earlier, provides us with inspirational motivation when she says, "Race literacy is liberating. It allows us to think, act, and understand issues of race in its true context. It gives us a more rounded view of the country in which we live. It gives us facts rather than myths. It removes some of the fear we have around engaging in a race conversation. It makes for constructive dialogue, leading to more enlightened and creative ideas on how to enact change. And it leaves us energized rather than depleted from always needing to hide from the subject. Race Literacy is empowering (Phillips, 2018)."

Teachers may be marginalized in society, with precious little political influence, but we hold the future in our hands every day as we prepare our students for the world they will inherit. We cannot, must not, allow any of them to feel less than what they are; the very image of God personified.

Chelsea Bowlin **SYMBOLS OF THE ASANTE OF GHANA: ENDURING TRADITIONS**

Asante

Today the Asante (or Ashanti) people are mostly living in southcentral modern-day Ghana, near the city of Kumasi. During the 17th century an Asante king, Osei Tutu, chose this location as the capital of the Asante ethnic group. The city is surrounded by thick forests and has a humid, wet climate. The Asante have always been a powerful and dominant ethnic group and by the early 19th century their territory covered almost all of present-day Ghana. They traded with the British and maintained many traditional beliefs. But throughout the 19th century many wars were fought against the British and the Asante land was declared a British colony in 1902. Eventually with the help of the Asante and the nationalist movement in Ghana, the Asante king was allowed to return to Kumasi in 1924 and Ghana won its independence in 1957.

Kumasi is a flourishing rich city which exhibits western and traditional characteristics. It has paved streets, gardens, and parks. Also located in the city is the Kumasi Central Hospital and Kwame Nkrumah University of Science and Technology. Remains of traditional buildings can still be found in the northeastern part of the city. The Asante Cultural Center includes a museum, a zoo and a library. There are also many Asante people outside the urban city limits who enjoy village life. They are farmers of local exports including plantains, cassava, yams and cacao.

There are many meaningful symbolic objects that still hold importance



(Source: Bristol Museums, Galleries & Archives)

from a single piece of wood. They can among the Asante people today. Some of these are traditional stools, umbrellas be for domestic use or public display. and kente cloth. This article will focus on these three traditional symbols of the Asante.

Stools

Although the Asante are organized as a matrilineal society, the Asante chief to son. Some stools were specifically is a male leader, and each lineage is represented by a wooden stool. These stools are very different from what you might imagine a stool to look like today. They are short and not very wide. From sitting on their personal stool. After a looking at them, you may assume they are not very comfortable to sit on. The seat is usually curved and supported by a rectangular base that includes a central column and four corner posts. To this day stools are sacred and symbolic to many people, and they are carved

Asante Stool. The stool is the most important symbol for the Akan. It serves as a symbol of authority and unity

There are many symbolic ways that these stools are used. They are believed to be a mediator between the living and the dead and embody the spirits of ancestors. They were given as gifts on marriage and passed down from father carved for women and some for men. Fathers give their children a stool as a gift when they learn to crawl and for young women, puberty rites include person has died, they are bathed on a stool before burial.

Chiefs and high-ranking officials can be recognized in part by their elaborately decorated stools. The chief and queen mother has a special stool or set



The current traditional king of Ghana's Asante people, the Asantehene Otumfuo Osei Tutu II celebrates 20 years on the Royal Stool, (Source: NewAfrican

its possessor.

of stools. These ceremonial tools may be smoked by placing them on a roof above a fire and are rarer than the less expensive regular household stools. These stools are the most important part of Asante royal regalia. The chiefs and officials are given permission by the Asantehene, Asante king, to have their stools uniquely decorated with detailed patterns of silver and gold. When an important leader dies ceremonial stools are blackened and it is believed the stool represents a person's soul.

The tradition of symbolic stools began with the Golden Stool. According to the legend, the king;s priest, Okomfo Anokye, caused the golden stool to descend from the

sky and landed in the lap of the first Asante king, Osei Tutu in the late 1600s. After this experience the priest proclaimed that the strength of the Asante people depended on the safety of the Golden Stool. This belief was so strong that the Asante went to battle against the British to defend the stool and allowed their king, Prempeh I, to be exiled rather than surrender the stool to the British. The seat of the Asantehene or Asante king and the Golden Stool are housed in Kumasi to this day. The Golden Stool is a symbol of royal authority and unity of the people. It also legitimized the ruler of

Umbrellas

Another important symbol found in Asante traditions are the use of umbrellas. These are not the nylon or plastic umbrellas you may be imagining that we use to protect us from rain. While the Asante umbrellas have the same general shape, they are much more elaborate. They were developed to provide a canopy of shade for their chiefs and kings. The umbrellas may be made of kente cloth or other fabric and may have a symbol made out of gold on the top. The patterns in the fabric are meaningful and different royal families have specific patterns in their umbrellas.

The Asantehene's court has the largest collection of umbrellas. During a ceremony, the king's procession requires seven umbrellas. But they always have eight just in case one of them breaks, it can be easily and quickly replaced. The Golden Stool requires two umbrellas, and the king's chair requires one umbrella. He is covered inside and outside during a ceremony. There are two types of umbrellas. The first ones are large and used for ceremonies and the second type is used daily around the palace and when the Asantehene has to attend a meeting.

Kente

Kente cloth is a symbolic fabric and has been worn by Asante royalty for a very long time. It was originally made from raffia fibers and resembles a basket weaving pattern. The different patterns symbolize and communicate different aspects of life. Traditionally, women wear two or three large pieces of kente cloth and men wear one large piece. Today, there are many different patterns, colors and sizes and people all over the world choose cloth based on personal preferences, not necessarily symbolic meaning. But colors and patterns still hold symbolic meaning.

The Asante people are rich in culture and symbolism. They have endured through the centuries and wars while maintaining their traditions and adapting to modern society.



Akan (Akwapim) Queen mother from Ghana sitting majestically in her palanquin with her full chieftaincy regalia, holding sword and dancing to the crowd. (Source: Pinterest.com)

Lesson Plan Idea

[•] Students can design a stool or kente cloth pattern that represents their family and share with the class

[•] Read Anansi the Spider: A Tale from the Ashanti and discuss the role of fables and folktales

[•] Read The Leopard's Drum: An Asante Tale From West Africa

ADINKRA SYMBOLS FROM GHANA AND THEIR APPROPRIATION IN MODERN CULTURE



Sankofa Biro

Within the continent of Africa, Ghana is located in West Africa. It was known as the Gold Coast during its colonial rule by Britain. Ghana is surrounded by land on three sides, the Ivory Coast to the West, Togo to the East and Burkina Faso to the North and it is bordered on the Southern side by the Gulf of Guinea, which is part of the Atlantic Ocean. In 1957, Ghana was the first country in Sub-Saharan Africa to gain independence from colonial rule. They have been a democracy since 1992 after many years of turmoil.

Prior to its independence, Ghana was a country of many different people Adinkra comprises three parts. The and cultures and this is still the case today. There are over 70 different languages in Ghana, however, the official language is English. Even though the people of Ghana have many spoken languages, they also have another way of communicating that has been with them since the 19th century. Ghanaians can communicate nonverbally using the Adinkra symbols that have been a part of their culture for centuries. One World Nations Online n.d¹

The use of symbols as a form of communication has been noted all the way back to prehistoric times with rudimentary drawings found on cave walls. However, the origin of the Adinkra symbols has not been confirmed. Based on what I have read, the reasoning seems to be that the history of the Adinkra symbols has been passed down from generation to generation through oral storytelling. While there are no facts that would support an official timeline of the beginning of the Adinkra symbols, the origin of the Adinkra symbol is said to have originated with a 19th century Gyaman king named, Nana Kofi Adinkra. The earliest known examples using Adinkra symbols are two pieces of cloth. One piece has been dated and is from 1825. The two examples of the earliest use of Adinkra symbols on cloth are each located in a different museum within Europe. Adinkra Symbols (2020, July 8).²

According to Ghanaian scholar, Daniel Appiah-Adjei, the word word di means "to make use of" or "to employ" Nkra means "message" and 'a' is the Akan prefix for an abstract noun. Together, di and nkra means "to part, be separated, to leave one another, or to say good bye." In the word Adinkra, nkra means the message or intelligence that each person (soul) takes with him from God on departing from earth (okra is the Twi word for "the soul") Thus, Adinkra implies a message a soul takes along when

leaving the earth, hence, the expression; "Saying good-bye to one another when parting". (pg. 61) Appiah-Adjel, D. 2014. Sankofa and Drama: A Study of Adinkra and Akan Clan Symbols in Modern Ghanaian Plays. (Publication No. 10031425) Doctoral Dissertation University of Ghana³

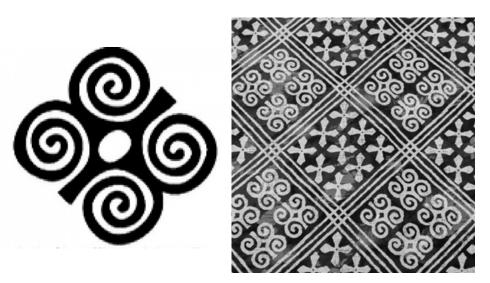
These symbols are layered with meaning and have been utilized as a subtle form of communication in Ghana for centuries.

One constant in the Adinkra symbol has been how they are created. If you are lucky enough to visit Ghana, you would be able to see that the symbols are still being made from carving the calabash gourd. The ink is made from the bark of the badia tree. The bark is used in a way that is renewable and does not destroy the longevity of the tree. The craftspeople who do this historical work take care with the environment. The ink is called adinkera (or Adinkra, I have seen it written both ways) aduru and is made by a multi-step process that involves breaking the bark apart, boiling it, refining it and then putting it on for a second boil. The cast-off products from the ink making process are put to further use and the goal is for nothing to be wasted. I feel like this makes the adinkra symbology even more meaningful, as the method of creating the ink is such an involved process. Creating this thick vegetable dye requires an awareness of nature, and the needs of the community all the way down to the heightened focus on the intricacies of creating the adinkera aduru.

Traditional printmakers will take the Adinkera Aduru and use stamps that have been hand carved from calabash gourds. When they are making cloth, the cloth is usually divided into strips and/or squares. This is commonly done with a type of comb, after the cloth has been secured to a stable surface. If you were to visit Ghana, you would be able to locate a printmaker skilled in the traditional practices that involve using Adinkra symbols. You

would see the making of the vegetable dye, the carving of the calabash, the application of stamps to fabric, as well as the option of buying a piece of Ghanaian folklore to remind you of your trip.

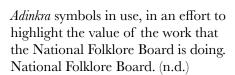
al mainstay in Ghana for a long time and if you look closely, you can see them all over Ghana. They are used in many different ways; cloth, buildings and for business signs and logos, just to name a few. Since *Adinkra* symbols are such an integral part of Ghanaian culture, Ghana has had them copyrighted since 1985. In an effort to keep their heritage vibrant and used in a way that will not detract from their history and meaning, the National Folklore



Dwennimmen Symbol

Board was formed in 2005 to assist in protecting the heritage of Ghana and their folklore. However, the NFB has struggled to maintain the integrity of their history and the accurate use of their symbols, across the globe.

In the recent past, there have been many different uses of Adinkra symbols worldwide. Consequently, the National Folklore Board has stated "there is the urgent need for Ghana to protect our folklore particularly our kente (the designs and the traditional knowledge of kente weaving) and our Adinkra symbols." I would like to point out a few examples of the appropriation of



One of the reasons Ghanaians have such a profound sense of urgency Adinkra symbols have been a cultur- to protect their cultural heritage is due to the proliferation of unauthorized use of Adinkra symbols in the last few decades. While Ghana has a copyright on their growing collection of Adinkra symbols under the laws of their country, those laws are difficult to enforce outside Ghana. The NFB should be able to exert some control over the folklore of their country. The NFB seems willing to grant access to the historical images of Adinkra symbols when the proper procedures are followed.

Vera Bradley Cuban Tiles Pattern

However, the most current information seems to be that only 22 organizations or companies have applied for the official right to use the symbols associated with the folklore of Ghana. While the website of the NFB does not have a comprehensive list of businesses that have been given the right to use the Adinkra symbol, I have found many instances of unofficial usage of Adinkra symbols. This can put the integrity of the cultural heritage of Ghana at risk.

I believe Ghanaians should be allowed the opportunity to protect their culture across the globe. Ghana should also be given the option to receive some

compensation for the authorized use of symbols that are a part of their traditions. In addition, there needs to be a way to enforce such copyrights across the globe. This could be a benefit that translates into the ability of countries all over the world to protect their heritage. In addition, it could also result in a way for countries to increase their income.

According to an email with the author of *The Copyright Thing Doesn't* Work Here: Adinkra and Kente Cloth and Intellectual Property in Ghana, Dr. A. B. Boateng, an Associate Professor at the University of California San Diego, "the use of Adinkra symbols in the U.S. goes back a long way, especially in the Black community." She adds that, "For African Americans, the symbols are a part of a heritage that was forcibly taken from them, and their use in that context is a kind of reclamation."

When the topic is related to the use of indigenous symbols she feels that "it is a different matter if the symbols are used by people who have no historical or cultural connection to them and simply want to make a profit at the expense of the Ghanaians who design the symbols and make the cloth." This Adinkra symbols that has been peris likely to have been one of many contributing factors behind the creation of the National Folklore Board in Ghana. (A.B. Boateng, personal communication, July 1, 2020)

Looking for occurrences of the use of Adinkra symbols in modern culture, I found my first example of the appropriation of an Adinkra symbol when the renowned American handbag and luggage company, Vera Bradley announced their Spring 2017 line. One of the patterns that Vera Bradley announced is named Cuban Tiles. Vera Bradley. (n.d.) Spring 2017 Inspirations.⁴ URL The Cuban Tiles pattern clearly included the Adinkra symbol of the Dwennimmen Adinkra, also known as Ram's Horns. The use of the Dwennimmen Adinkra symbol in this pattern does not seem to pay homage to the heritage or culture of Ghana in any way. Nor is there any discernible

nod to the meaning behind the symbol. Burial Ground National Monument.

Dwennimmen is the Adinkra symbol of humility and strength and emphasizes that even the strong need to be humble. It was used in the Cuban Tiles print and I was unable to find any research that the National Folklore Board supported the use of this symbol for the pattern. In fact, I found evidence in a 2018 research paper by J. J. Osei-Tutu, that the symbol was used in violation of Ghanaian copyright laws. Osei-Tutu, J.J. 2018 Harmonizing Culture IP Across Borders: Fashionable Bags and Ghanaian Adinkra Symbols. No. 18-16. Florida International University.⁵ This is an excellent example of why the Ghanaian people should be involved in the decision-making process of whether the use of a particular Adinkra symbol should be allowed. The NFB could have allowed the use of the symbol for a fee, but they very likely would have been interested in the naming of the pattern. It is likely that the pattern name might have been something other than Cuban Tiles if Ghana had been involved in the naming process.

Another example of the use of petuated in our modern society can be found in the African Burial Ground National Monument in New York City. During a construction project in the early 1990's, an unexpected archeological finding was made. They discovered a burial ground that was estimated to have originally been the resting place of more than 15,000 enslaved and freed Africans and African Americans.

"Memorialization and research of the enslaved African skeletal remains were negotiated extensively between the General Services Administration, the African – American descendant community, historians, archaeologist, and anthropologist, including city and state political leaders." African Burial Ground National Monument (n.d.) History and Culture. 6

The work that went into this project enabled the creation of the African

This National Park allows people the opportunity to learn about the history of African and African Americans in New York. The National park is also a way for people to be introduced to the history of the many different cultures that were subjected to enslavement in the Colonial history of New York.

The African Burial Ground is pertinent to the discussion of Adinkra symbols because they are an integral part of the design used in this National Park. If you look on the website for this historic location, they have a list of the symbols that are featured throughout the park. There is a page on the site that is dedicated to the explanation of Adinkra symbols and at the bottom of the page is a list of twenty-two symbols.

Each of the names listed have a link to a page where the symbol is shown. Click the link and you will see an image and a brief explanation. The title of this page is "Adinkra Symbols Explained" and the name headed on the list is "Learn the meanings of Adinkra symbols:". However, of the 22 symbol names listed, only twelve are actually Adinkra symbols from Ghana. The others are voodoo symbols, bakongo cosmograms, a Latin cross, a Native American medicine wheel, an Islamic Tanit symbol, and an ankh. In addition, there is a monument that includes the Nsibidi symbol that is meant to represent love & unity. Other than hieroglyphics, the Nsibidi symbols are the oldest form of writing and are still in use in southeastern Nigeria and Cameroon. This symbol is neither an Adinkra symbol, nor is it from Ghana.

The remaining symbols from the list are true Adinkra symbols from Ghana and are included, along with the meaning that the park attributed to it, below:

- Nsoromma Guardianship
- Gye Nyame Supremacy of God
- Asase Ye Duru Divinity of Mother Earth
- Hye Won Hye Imperishability and Endurance



NATIONAL FOLKLORE BOARD GHANA

AdinkraBrand is a company based in Spain, and their goods are produced in the United States and Europe. What is different about their company is that they have the support of the NFB. They prominently display the logo of the NFB of their African Knowledge Hub webpage.

- *Matie Masie* Wisdom and Prudence
- Akomo Ntoso Understanding
- Funtunfunfu Denkyemfunefu Unity in Diversity
- Dwennimmen Humility and Strength
- *Denkyem* Adaptability
- Akoma Endurance, Understanding
- Sankofa Learn from the Past
- Nyame Biribi Wo Soro God is in the Heavens

While the African Burial Ground National Park is a remarkable way to acknowledge the lives of the men, women and children who were part of life in New York during the Colonial times, the well-intentioned people who created this memorial could have enlisted the help of the peoples who are more knowledgeable. I think that the National Folklore Board of Ghana would have been honored to assist with this project. Having Adinkra symbols included in a monument and memorial of this scope is an opportunity to welcome the world to an important piece of the culture of Ghana that represents the past, present and future. It would be reasonable to have Ghanaians involved in preserving the legacy of their culture by offering them the chance to contribute to the accuracy of the project. African Burial Ground National Monument (n.d.)

As we can see there have been missed opportunities for the people of Ghana. These chances would have helped Ghanaians establish a historically accurate and culturally pertinent display of the iconic symbols associated with their heritage, on a worldwide stage. It is especially notable in the example of the National Park in New York.

However, when the NFB is allowed to exercise their due diligence, the results can be an exhilarating combination of historical integrity and modern culture. For example, the company AdinkraBrand has a website replete with vibrant images of over one hundred and twenty Adinkra symbols. They have the image of the symbol, its name and the meanings and/or proverb associated with each symbol. They even have an audio link to the correct pronunciation!

AdinkraBrand is a company based in Spain, and their goods are produced in the United States and Europe. What is different about their company is that they have the support of the NFB. They prominently display the logo of the NFB on their African Knowledge Hub webpage.

The complementary relationship between this European based company and the African country of Ghana is

Adinkra Symbols Explained. 7

very plain to see as you surf through their website and peruse their product selection. They have an eclectic range of items for sale and their products rely heavily on Adinkra symbols.

Due to their collaboration with the NFB, AdinkraBrand would be less likely to make an error in their use of the Adinkra symbols. The knowledge base of Adinkra symbols featured on their site is comprehensive and accurate because of their work with the NFB. If a customer were to find the Adinkra symbol Epa visually appealing, they would be able to ascertain that this symbol represents handcuffs and is often associated with slavery. However, according to the company website, this Adinkra symbol "discourages all forms of slavery".

It is a substantial responsibility to work with iconic symbols that are tied to centuries of a nation's heritage and cultural pride. The *Adinkra* symbols represent an example of what a country can accomplish when they strive to protect their legacy in a cooperative and effective manner. I hope that we can begin to work more globally in a concerted effort to help preserve the cultural identities of countries and their people.

Seeing behind, viewing the past, a great reflection of life

Ancestral knowledge stretches its gifts towards us saying

New ideas are based on old ideas. It is consequential

Keen examination of the past, a strong bridge for the

Older generation to have a place in the newer generation.

Forming an essential past shapes an essential present and future

Almighty God looked back and said, "It was good". Amen!

Poem composed and designed by Daniel Appiah-Adjei (pg. 257) Appiah-Adjel, D. 2014. Sankofa and Drama: A Study of Adinkra and Akan Clan Symbols in Modern Ghanaian Plays. (Publication No. 10031425) Doctoral Dissertation University of Ghana.8

Stephanie Schuette **A NEW NARRATIVE: TEACHING PRE-COLONIAL AFRICAN EMPIRES**

It can be a challenge to include a variety of stories into one's teaching practice. Modern world history classrooms can easily become Eurocentric in nature if purposeful attention is not paid to incorporating other cultures, periods, and places. Renowned Nigerian author, Chimamanda Adichie, aptly notes that when we show "a people as one thing, as only one thing, over and over... that is what they become." The intention of all educators, of all levels and fields, should be to try and change this perception.

Africa is immensely diverse in its population and legacy on humanity is profound. Not only is the continent the birthplace of humanity, it is also steeped in rich history and culture. So why then is so little African history taught in the classroom? Also, how can the stories we tell students become more diverse and representative of the vast nature of "African" history? The stories we teach need to represent more than just the Atlantic Slave Trade and colonization. Again, Adichie reminds her listeners that if you "start the story with the arrows of the Native Americans, and not with the arrival of the British... you have an entirely different story. Start the story with the failure of the African state, and not with the colonial creation of the African state... you have an entirely different story." So... where should the story begin?

There are countless empires, civilizations, leaders, and kingdoms

that have comprised African history. Depending on where a school's standards begin may determine where the story starts. However, many U.S. states only offer a "modern" world history class, many of which begin in the 16th centuries and beyond. Do not let this discourage you from incorporating empires from before this period. The lessons do not have to be long and can even be pitched as "pre-history" or contextual in nature. Options of study include Carthage, Egypt, Axum, Kush, Nubia, Punt, Kongo, Zimbabwe, Songhai, Mali, the Igbo, Zulu, and Ethiopia (among many others). Obviously, it would be difficult to cover all of these places without teaching a class devoted entirely to African history, so educators should select what best fits their classrooms and infuse their curriculum with these new topics which will, in turn, give more depth and context to students.

The three empires that will be highlighted here are ancient Egypt, the Great Zimbabwe, and the Malian Empire.

Ancient Egypt (5,000-332 **B.C.E): Context & Strategies**

There are pros and cons to incorporating ancient Egypt as a "case study" of African history. The pros include being able to tap into students' prior learning and allowing them a moment to contribute this knowledge to the classroom. Another benefit is the amount of resources

and materials that are available to teachers on this subject. Often covered in lower grades, doing a "mini-unit" on Egypt can be a good way to dive deep into a specific topic or theme on this history, or simply remind students that yes! Egypt is in African and Egyptian culture *is* African culture. The major architectural, mathematical, agricultural, and medical achievements of Egypt should be attributed to and taught as African history. The downsides to teaching about Egypt as a starting point are that the material could become repetitive, as many students may have learned it in prior grades (though that is never a guarantee). Furthermore, the timeline of ancient Egypt is immense and covers endless dynasties and kingdoms. It can get easy to be bogged down and stuck in the macro-approach to history. As such, choosing a theme, topic, or main focus is key. Incorporating primary sources or virtual field trips could help students develop new information on which to draw. Using archives, source material, or photos from places like the Egyptian Museum or the British Museum is a great start.

Present students with photos of canopic jars, for example, and ask them: What could these jars have been used for? What materials were used to make them? What do the images on these jars possibly represent.⁹ Also, beginning with maps of the region at the time (and perhaps comparing old borders to current ones) is a helpful exercise in getting students to know where this place in the world exists. Other ideas for deep dives into a topic or person include

the class structure of ancient Egypt or their religion, or have students choose a person or god to learn about and then share out on. The possibilities are endless!

The final way to close out a unit or lesson of this kind is to give a summative takeaway and/or have students create their own. For example, in his Crash Course on Ancient Egypt, John Green remarks that "because Egypt was so similar for so long, it all tends to blend together when we imagine it. Ancient Egypt lasted 1000 years longer than Christianity has been around, and about 800 years longer than that other super-long-lived civilization, China. [Egypt's] entire culture... lasted longer than Western civilization has existed, and it had run its course before "the West" was even born." What a great, final reminder for students to keep in their minds as they wrap this first unit on early African history.

The Great Zimbabwe (1100-1500 C.E.): Context & Strategies

Compared to Egypt, many students have probably not heard of the Great Zimbabwe, and likely can't place it on a map. This is a good chance to give them a new and impressive story about an older African civilization. In short, the Great Zimbabwe is an impressive ancient structure. Dr. Nancy Demerdash, professor of art and art history of Albion College in Michigan noted in her research that "the settlement [of Great Zimbabwe] encompasses a cluster of approximately 250 royal houses built of clay, which in addition to other multi-story clay and thatch homes would have supported as many as 20,000 inhabitants-an exceptional scale." It was a huge, complex, beautiful, structure. The size of it is vast: there are towers and walls and houses and patterns and monoliths and gates and caves.

Showing images of the ruins and having students watch source material



Aerial view of Great Zimbabwe's Great Enclosure and adjacent ruins, looking southeast (Source: Janice Bell, CC BY-SA 4.0)

on the subject (found at the end of this lesson) is a good way to segue into the topic of the Great Zimbabwe. Also, using maps is key since many students will likely not know where the country of Zimbabwe is. Furthermore, setting up linear context to other events of the time is helpful to paint a fuller picture of the accomplishments happening in Africa prior to colonization and the enslavement of people. What was happening in Europe during the 13th and 14th centuries, during the *height* of the Great Zimbabwe? How does comparing this civilization to the ones common in Europe change or amplify your knowledge of history?

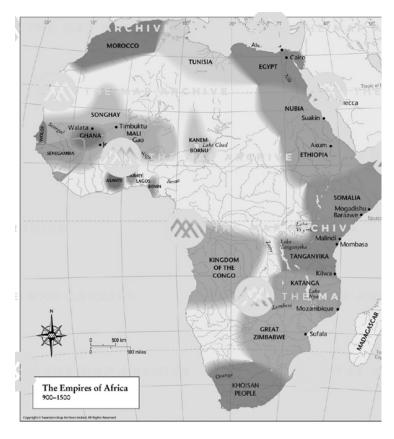
As the Zimbabwean cultural heritage manager and noted archeologist Webber Ndoro puts it, "Great Zimbabwe, together with its associated features, is one of the most dramatic architectural landscapes in Sub-Saharan Africa. As a cultural symbol and link with a pre-colonial past, it is of the first importance for African identity in Southern Africa." It is imperative to expand students' stories of African societies and culture by showcasing these fabulous achievements that often go unrecognized.

The Malian Empire (1235-1670 C.E.): Context & Strategies

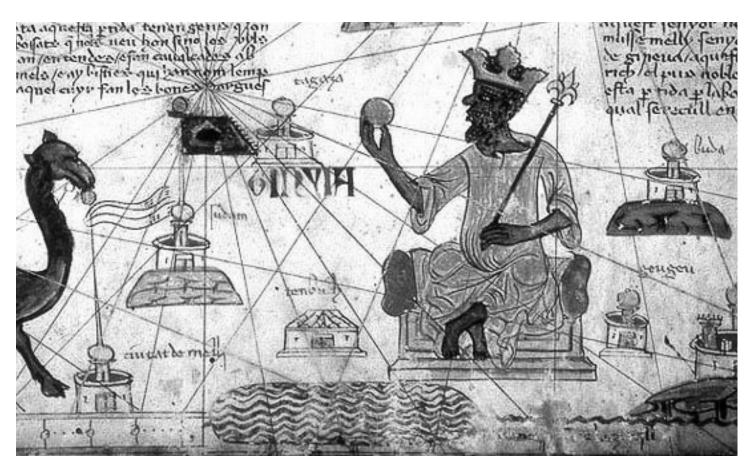
The last "case study" of ancient African civilizations is the Malian Empire. Many educators have likely heard of Mali and Mansa Musa and Ibn Battuta, but that may not be the case for students. Again, students may not know where Mali is on a map (plus the current borders are different from the ancient Malian Empire), so starting with a map analysis is always a good strategy.

Doing a personality profile on the two main figures of the Malian Empire could be a good way to do a deeper-dive into the content, while not getting bogged down in the details. Mansa Musa, the king of Mali, and his famed scholar and explorer, Ibn Batutta, are great content to sample from. Most historians agree that Mansa Musa, quite literally, put his kingdom "on the map" during his *hajj*, or pilgrimage, to Mecca. Mansa Musa expanded his empire to the west African coast by strategic annexations and acquisitions of various cities and territory. As such, Mali expanded, meanwhile Mansa Musa "gained control of important trade routes" and the empire became "rich in natural resources such as gold and salt." Bringing an extensive caravan with

him during his travels, Mansa Musa reportedly crashed numerous economies along the way because he spent so much gold in the cities he visited. The famous image of the king holding a golden globe was drawn into a 1375 Catalan Atlas and would remain a testament to his prestigious wealth and power. Indeed, "the king's rich legacy persisted for generations and to this day, there are mausoleums, libraries, and mosques that stand as a testament to this golden age of Mali's history."



Some of Africa's empires. (Source: historyofyesterday.com)



King Mansa Musa of Mali (Source: Archive Islam)

Resources & Lesson Ideas

The depth and detail of these lessons is flexible and depends on the teacher, their schedule, and the classroom dynamic. The main point is to give students background knowledge that they otherwise would not have had. Giving them a multi-faceted understanding of African history will not only allow them to better understand Africa's place in the world and its many accomplishments, it will also allow them to be a better student of world history, in general.

Don't forget to include map analysis, primary and secondary sources, videos, projects, self-guided research whenever possible, virtual tours and field trips, as well as "gist statements". Creative ways of synopsizing content include One-Pagers, creating travel brochures, or rhyming couplets to review the content.

Below are some of the sources used in this article, as well as more that could be used in the classroom to develop context.

Ancient Egypt:

- "Ancient Egypt 101" by National Geographic
- "Ancient Egypt: Crash Course World History #4" by John Green
- "Take a Free Virtual Tour of Five Egyptian Heritage Sites" by Smithsonian Magazine
- "The Black Roots of Egypt's Glory" by Charles S. Finch via The Washington Post (1987)
- "Ancient Egypt: A Brief History" by Live Science

The Great Zimbabwe:

- "Great Zimbabwe National Monument" by UNESCO (video)
- "Great Zimbabwe National Monument" by UNESCO (webpage; click here for photo gallery)
- "Who Built the Great Zimbabwe? And why?" by TED-Ed
- "The City of Great Zimbabwe" by Africa's Great Civilizations via PBS
- "Great Zimbabwe" by Dr. Nancy Demerdash via Smart History

Empire of Mali:

- "The Empire of Mali: Mansa Musa" by Extra History
- "Mansa Musa: The Richest Person in History" by TED-Ed
- "Ibn Battuta: The Great Traveler" by Extra History
- "Ibn Battuta" by PBS
- "Kingdom of Mali: Primary Sources" from Boston University

Carrie Wells

AFRICAN ORAL TRADITIONS: PRE-COLONIALISM, COLONIALISM, TODAY, **AND THE FUTURE**

Introduction to African Oral Traditions

Globally, oral storytelling traditions reflect the history, experiences, and values of a particular culture. Throughout Africa, oral narratives are as rich in diversity as the continent itself. They bring histories not present in archives, books, or other forms of literary tradition to life. They are instruments of cultural preservation, carried generationally through spoken words, gestures, songs, facial expressions, body movements, and dramatic interpretations that make stories memorable. Oral storytelling emphasizes rhythm and the repetition of language, which allow audience members to participate alongside the storyteller.

Evidence of oral tradition in Africa pre-dates colonialism by thousands of years, but was disrupted when German, British, and French settlers colonized throughout Africa. After gaining independence throughout the continent from the1950s, African cultures reclaimed ownership over their narrative, to be spread internationally, not just through spoken word, but through fashion, movies, architecture, and other forms of creative expression. A journey through time illustrates the resilience of people faced with incredible circumstances.

Pre-Colonial African Oral Traditions

Pre-Colonial Africa included the time when human life emerged in Africa, about 200,000 years ago, through the 1850s, when British, French, and German missionaries began to colonize areas throughout the continent of Africa. Prior to colonization, external influences on African societies included people of Arabic, Portuguese, and Dutch descent. Unfortunately, for many years historians identified the pre-colonial period as a time devoid of culture as it had not yet been influenced by a Eurocentric worldview. However, we now know that the continent of Africa contained rich, diverse, regional cultures, largely kept alive today through oral traditions. Below are examples of the roles and societal significance of different African storytellers during pre-colonial times. Storytellers have shaped a global understanding of pre-1850s Africa, including the values, experiences, and beauty of a diverse people.

A Griot is a West African historian, storyteller, poet, genealogist, and musician. Griots originated in the 13th century in the Mande empire of Mali. For centuries, they have retold the empire's history, keeping their stories and traditions alive. In the time

of Emperor Sundiata, whose reign lasted from 1235 - 1255, Griots tutored princes and gave council to kings. They were educated and wise, and they used their detailed knowledge of history to share present-day dilemmas. Long after the fall of the Malian Empire in 1468, a wealthy West African family would have their own Griot to counsel them and help negotiate matters with other families. Griots arranged terms of marriages and mediated disputes, relying on their understanding of each family's history.

There was usually only one Griot per village, and he was the social memory of a community and the holder of the word, the keeper of facts and important events of his time. Griots passed the tradition of storytelling along the familial line. Traditionally, Griots only marry fellow griots. Being a Griot was part of a lineage of parents, grandparents, and generations of ancestors who shared the gift of storytelling and musicmaking. A Griot trained by learning to play instruments and listening to elder *Griots* telling their stories. The training was extremely rigorous and took many years of listening and memorizing to complete. In some families, they were taught to build instruments by the age of seven or eight. The musical instruments could include the kora (a 21 stringed lute-bridge-harp), the

xalam (a variation of the kora but with fewer strings), the ngoni (similar to the *xalam* but with five or six strings), the balafon (a wooden xylophone), the goje (a stringed instrument with a bow, much like a fiddle), drums, or horns. Only after years of study do Griots acquire the skills necessary to perform the repertoire of hundreds of songs and stories that make up their heritage.

Female Griots were known as Griottes. Griottes traditionally sang at ceremonies and special celebrations. West African women sang about a woman's role in the society and their relationships with husbands and in-laws. Griottes also used songs to express their independence and selfreliance and to comfort, encourage, and empower other women. When a woman married, a Griotte would sing to her to prepare her for her new life. The *saabi* was a long poetic narrative form sung by West African women to reveal the nature of relationships between men and women.

In pre-colonial Nigeria, prior to the advent of written language, storytelling was used to educate, preserve oral history, and convey cultural norms to the indigenous people. Some storytellers developed specific talents, like the memory and endurance to retell unabridged histories, while other mastered the art of engaging children and adults in a communal participatory experience. Stories conveyed messages of respect, morality, societal norms, and customs. Children often practiced appropriate listening skills while parents, grandparents, aunts, and uncles shared oral narratives of their family's heritage.

The west Nigerian practice of folktale telling by the *Idoma* people was common in traditional societies in the past, where parents and other members of families told stories to young ones, usually after the evening meal. It was a lively process, likened to an integrated classroom, where children, teens, and adults attend and participate. Traditional African education aimed to



The griots of Sambala (Source: Wiktionary

produce an individual who was honest, respectful, skilled, cooperative, and conformed to the social order of the day. Stories articulated man's response to his environment. The relationship between *Idoma* proverbs and folktales is one in which both genres are interwoven by complementing and enhancing the quality of the other to create a complete story. Proverbs, which were considered the intellectual property of the elders, were employed in the training process of children by imparting new life lessons or correcting them on errors they may have committed. Evidence of life in Nigeria dates back at least 13,000 years, and much of what is known about the area's history can be traced back to oral youth out of rural communities and traditions.

African Oral Traditions During Colonialism

During the early 19th century, Europeans who visited Africa created stories of the supposed uncivilized indigenous people living throughout the continent to justify exploitation

and colonization. The colonizers informed the world of people without culture, summoning a need for external intervention and conquest. The onslaught of colonialism had myriad consequences, but the shared determination of the African people to share their truth with the world became evident when their independence was regained. This impact on storytelling during times of colonialism spread throughout Africa and the African Diaspora.

The most profound and continued loss of oral memory in Africa can be attributed to global economic forces and Westernization, which drew caused them to devalue the historic knowledge of their elders, viewing it as obsolete and unimportant. The oral tradition has been dismissed by Western sharers of knowledge. Essentially, they have downplayed the complexity of the oral tradition through presenting false written narratives about Africa as a primitive land without meaningful experience.

The legacy of a Eurocentric viewpoint has also continued to determine the parameters of knowledge production, with written language assumed to be superior to oral tradition. Written language was often the only recognized form of passing along information by many scholars and historians. This idea of a single written narrative is not only myopic, but contributes to the spreading of damaging stereotypes about entire cultures and societies.

In East Africa, the Maasai have a rich collection of oral literature that includes myths, legends, folktales, riddles, and proverbs. One well-known Maasai proverb is "The mountains can never meet but people can always meet..." These stories and sayings were passed down through the generations. The Maasai also composed many songs. Women were seldom at a loss for melodies and words when some heroic deeds completed by a warrior inspired praise. They also improvised work songs to enjoy while performing manual labor and songs to ask their traditional god Enkai for rain and other needs.

Prior to British colonialism, Africans, Arabs, and European explorers considered the Maasai formidable warriors for their conquests of neighboring peoples and their resistance to slavery. Caravan traders traveling from the coast to Uganda hesitantly crossed Maasailand. However, in 1880–1881, when the British unintentionally introduced a cattle disease, the Maasai lost 80 percent of their stock. The British colonizers further disrupted *Maasai* life by moving them to a reserve in southern Kenya. While the British encouraged them to adopt European ways, they also advised them to retain their traditions. These contradictions resulted, for the most part, in leaving the Maasai to develop almost independently.

It is important to note the impact of Westernization, and more clearly slavery, on storytelling throughout the African Diaspora. In the essay "In

Search of Our Mother's Garden" by Alice Walker, the author describes the forced abandonment of all creative forms expressed by women whose role was to serve a white overseer. To comply with the demands placed upon them, generations of women living in slavery suppressed their artistic talents, including painting, singing, poetry, and storytelling, as they were forced to complete the tasks deemed most undesirable by society. For many years, it was a crime punishable by the law for Black women to learn to read or write, and when we look back at the few contributions Black women were capable of making to the creative fabric of American society, they are generally labeled "created by anonymous Black woman" in modern-

African Oral Tradition Today

day museums.

"...the world is old, but the future springs from the past" from the Epic of



Gambian Kora player and griotte, Sona Jobarteh (Source: Mark Kucharski)

Sundiata, Mali.

African histories exist in their own right, not merely as an addendum or companion to European history. In showcasing history through the lens of oral tradition, we can uncover centuries of societies the world is only beginning to understand. To share the history throughout Africa with the rest of the world, written literature was born out of the oral genre, such as folktales, myths, and legends. Folklorists are good entertainers while the tales inspire writers in the present day.

The role of the Griot is still important in Western African societies. Novel stories about new triumphs and exciting adventures are still being told by the village Griots. And while they continue to play an important role in modern west African societies, the Griot's position in African society has changed. These performers are still in great demand to conduct ceremonies

and parties, but today they also are popular singers who reinterpret traditional songs and perform on television and radio and record. Despite the changes in their duties, they continue to be respected members of the west African culture and provide a strong link to the past. They remain the historians, genealogists, advisers to nobility, entertainers, messengers, and praise singers in communities.

Although it is changing, Griots still find it difficult to marry outside of their social group. They sing songs of praise for their leaders and recount the great deeds of ancestors and the history of the society. Griots also may use their vocal expertise for gossip, satire and political commentary. Elders from the region, which is now modernday Ghana, are steeped within the oral tradition, and act as conduits of knowledge by passing down proverbs, some of which are reflected in Kente cloth print.

In Cameroon today, folktales keep the community united. They help reserve the knowledge, wisdom, and techniques which are part of the society. The narration of the tales takes place at night after the evening meal. The oral folktale can be recited, sung, and adapted to various circumstances. Each tale retold provides new insight to the audience receiving the message In the western region and south of Cameroon, evening gatherings provide an opportunity for the current events of their land and members of their community to be discussed or planned Solutions to problems are generated based on morals and lessons taught through folktales.

Contemporary storytelling events in Cameroon contain several importan elements. Folktales are divided into three sections: an opening, body, and conclusion. The storytelling session begins with an opening, followed by jokes and riddles. Once the audience is engaged, the storyteller starts the narration of the tale. The storyteller sets the scene, introduces characters,

and describes the conflict. In many areas in Cameroon, participants perform a dramatic interpretation. The storyteller sings, dances, shouts, and invites the audience to do the same. The storyteller uses colorful language to illustrate the narrative as it is brought to life.

While written language has been available for many years in west Africa, other areas of Africa still rely on village elders who are now in the 80s to teach the history and storytelling methodology to future generations. Many younger people are oblivious to the histories of their people. Maintaining the culture of storytelling preserves the values of a given group of people while adding a contemporary spin.

Today, African stories are full of wisdom and generally convey a moral or teach a lesson. Often these lessons are ones of resourcefulness, independence, and illustrate the rewards of courage. Many of these fables, myths, epics, and folktales have become popular throughout the African diaspora.

With more artists highlighting the abundant histories of Africa, the tradition of passing knowledge through generations has invited a moment of change within wider Western establishments. In her TedTalk "Why the Most Important Person in Africa is the Storyteller", Zain Verjee shares the modern-day and future role of the African storyteller. The creative and cultural entrepreneur of the storyteller is the most important person in Africa. The storyteller is the one person who can authentically export Africa's stories - viscerally, emotionally, and imaginatively - to the rest of the world. Due to technological innovations, the African storyteller is more than just an orator and musician: this role is now filled by authors, architects, filmmakers, actors, fashion designers, rap artists, and others whose passion is to share the cultures of Africa with the world.

Conclusion

In contrast to written literature, African orature is created to be communally performed through spoken words, singing, instruments, and dramatic renderings. A storyteller performs narratives, sometimes wearing masks and costumes, that can be hours or even days long to relate the history, genealogy, and politics of a community. The oral traditions of Africa are rich and varied, developing with the beginnings of African cultures, and they remain living traditions that continue to evolve and flourish today. The oral tradition must be recognized and valued globally in order to represent the totality of truths that abound within the diverse regions of Africa. The future of African storytelling lies in the creative efforts of the artists who continue to share their talents worldwide.

Lesson Plan Ideas

With a focus on African oral traditions, teachers can utilize different methods to teach the art of retelling and reimagining stories at any grade level. The following are several ways students can rethink written literature by adding new elements to bring stories to life. It is recommended the students select grade-appropriate traditional literature, including fables, folktales, myths, and legends.

- Students can work in pairs to retell the selected story to their class, by using elements of African oral tradition, such as riddles, proverbs, and repeated phrases, to enhance the listeners' experience.
- Students can select a short story to illustrate. Illustrations can be made using various media, like pencil drawings, paper collages, or watercolor paintings, to give depth to the characters and their journeys.
- Students can select a character from a story they have read and tell a new tale that includes that character. The new tale's setting can be modern day or traditional, in Africa or somewhere else around the world.
- Students can be given unfamiliar literary pieces to discuss in groups. The students will work together to determine the message or lesson taught in each story.
- Students can either find or create music to be paired with a familiar story. The essence of the music should complement the tone of the story being shared.

Diane Gow McDilda

AFRICA'S EARLY IRON AGE: RE-EXAMINING THE SOURCE AND INNOVATIVE APPROACHES

worked from the earth and forged by fire, its developed and advanced iron technology, artifacts tell tales of past civilizations. From while others resist, somewhat forcefully, iron's history began in the stars but is woven throughout sub-Saharan Africa. Was the through thousands of years of our human timeline.

Technology is historically categorized by the ages, from the prehistoric stone age to ancient history's bronze and iron ages. Now, in our lifetimes, the atomic age introduced weapons of mass destruction, the space age shot us into the unknowns of the universe, and the information age that amazes me every time I print a document from my phone. But these descriptors do not mark a strict end and beginning, nor are they without contest. As so many of us are learning, while some have known their whole lives, our history is not without guestion. What was taken as our stories, we know began as someone else's stories. And while some versions, be they fact or fiction, are founded in chronicled documents. others like Africa's Iron Age are hidden not only under layers of ancient earth and across vast distances, but misgivings of context and chemistry.

Shadreck Chirikure, stated in his book, Metals in Past Societies A Global Perspective on Indigenous African Metallurgy, "In any case, the laws of physics and chemistry, which are so lucid today, were mostly haphazard before the nineteenth century such that today people tend to think that discovery and innovation in the past followed the nice and neat picture depicted in the periodic table of elements (Chirikure, 2015)."

Some see metallurgical artifacts

Iron, with its strength and endurance, as proof that African cultures alone shovels and hoes, to bells and lightning rods, that it came from other lands and diffused art of iron metallurgy brought to Africa from the Phoenicians to the north through Carthage? Or was it founded in the Near East and passed into the Horn of Africa? Was the knowledge introduced from the Middle East to Egypt where it then made its way up the Nile and beyond? Could the science of iron metallurgy be developed independent of copper and brass? Or must the ages follow in order? It is with science that we can search for answers, examine the past, and with wisdom tell the story. And with that we begin with the certainty of the periodic table of elements.

A Periodic Primer

Stripped bare, the periodic table looks like a castle, with turrets on both ends defending an uneven wall. (Kean, 2010). It has eighteen groups or column and seven rows or periods, with an additional two rows below. And more importantly, it is completed, brick by brick by of the known elements. Their locations demonstrative of each element's characteristics fixed and organized. The smallest unit of any one element is the atom, derived from the Greek work atomos, meaning indivisible. If given a choice of a superpower, super submicroscopic vision is the obvious champ. Imagine witnessing the world of atoms and molecules as they collide and combine, sometimes contorting into other substances.

About eighty percent of the elements are metals occupying the left most

'turrets' and the 'uneven wall'. If we sat comfortably in a room with metals, most would be gray and solid, the exception being mercury (Hg) the viscous silver fluid formerly found in thermometers and played with by children when the thermometers broke. The temperature needed to melt metals can range from 400 degrees Celsius (752 degrees Fahrenheit) to 6000 degrees Celsius (10832 degrees Fahrenheit). Heating iron conjures up images of blacksmiths working their trade over open flames bending the glowing metal to their will with an anvil and hammer. Forging temperatures kept near 1370 degrees Celsius (2500 Fahrenheit) are warm enough to bend it but too cool for it to melt.

Nonmetals lie to the far right separated from the metals by an undetectable staircase zigzagging its way from just above aluminum (Al) to just below tellurium (Te). Unlike metals, they vary in color and phase, with those furthest right being gases. The exception here is bromine, the only other element taking on a liquid form at room temperature. Metalloids line staircase sharing characteristics of both metals and nonmetals.

The whole numbers on each brick represent the number of protons, the positively charged subatomic particles located in the dense nucleus at the center of each atom. This atomic number is the sole identifier of an element as no two are the same. Neutrons share the nucleus but have no charge, adding mass to the atom and forming isotopes by jumping into and out of the nucleus. (This will come up later.) As would be expected, the mass of the elements increases as does the atomic

number. Negatively charged electrons whirl distantly about the nucleus in a push-pull of sorts. Pulled in toward the oppositely charged nucleus but rebuffed by their fellow negatively charged electrons. Valence electrons lie the furthest away from the nucleus thereby leaving them to interact with their environment. These valence electrons can abandon one atom for another, rob valence electrons from or join in an electron pairing with a neighboring atom, or float effortlessly in a sea of other electrons. The latter describes the formation of alloys, the physical combination of two or more metals. Because alloys are not a true chemical bond, each metal retains its own properties. Gold and silver become white gold, copper and tin become bronze, and iron and chromium become steel. These metals can be combined or separated based on one physical property, melting point.

Iron Minerals and Ores

Metallic iron is pure, not bonded to any other element. It is rare with its only source being meteorites, bits of asteroid left over from the creation of the universe that after traveling the heavens for billions of years came crashing to earth. Those bits of galactic history also contain iron-nickel alloys or meteoric iron. More plentiful are iron ores, here since Earth was formed. Ores differ from metallic iron and alloys because ores are mineral compounds meaning iron is chemically bonded to other atoms or groups of atoms, predominantly oxygen. Two most common iron oxides are hematite (Fe2O3) a reddish-black stone and magnetite (Fe3O4) a blackish-gray rock with magnetic properties. Brown limonite (2Fe2O33•H2O) contains water within its chemical structure. It is in these forms of iron and the allovs they formed that were dug from the Earth by hand and bent to man's will thousands of years ago in Africa.

The Art of Iron Smelting

The process to separate out iron from its oxides, such as the kind found in Africa. is done in a bloomery. The difference between a bloomery and a modern-day furnace is that in a bloomery, smelting is done in batches, not a continuous stream. At the end of each burn, the wrought iron



Iron ores (Source: @ garagealchemy1/flickr)

product is removed.

Construction of the furnace started with a pit lined with burned clay or mud rendered from termite mounds to termite mounds (Schmidt & Childs, Ancient African Iron Production, 1995). This was topped with a vertical shaft made of clay bricks. In some cases, clay pipes or tuyère penetrated the clay pit liner reaching into the charcoal. Bellows were worked from the outside of the stack and pointed into the tuyère to blow air, or fan the flames, of the charcoal. Evidence from excavation sites, indicates that Africans experimented with different types of tuyère designs and to afford pipes capable of withstanding extreme temperatures of the furnaces and structurally sound enough to extend into the charcoal (Schmidt, Historical Archaeology in Africa: Representation, Social Memory, and Oral Traditions, 2006). Not all designs used tuyère to direct air bellowed into the furnace, some bellows were used to blow air from the top of the stack downward into the charcoal. Other designs lacked tuyère and bellows all together, relying on a natural draft of air. Designs were adapted to each location according to labor, hardwood, and ore available.

Construction of the stack or shaft was a vital component to the smelting process as it insulates the furnace from oxygen in the outside air. This ensured that any oxygen reacting in the furnace, came solely from the iron ore. Clay bricks at the

base of the stack which allowed room for expansion without cracking. Further up, the bricks combined clay coils, with the top solely clay coils, just like the ones you made in ceramics class. Taller shafts were sealed with plaster and ranged to heights of two meters. Wood scaffolds provided additional fortitude and a loading platform. Furnaces with taller shafts are thought to be more permanent structures (Van Noten & Raymaekers, 1988).

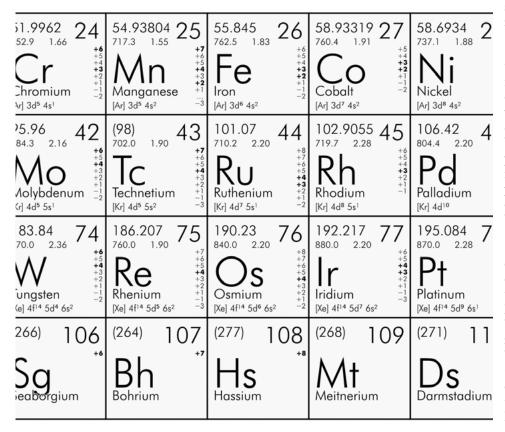
The charcoal used in the furnace came from nearby trees, usually hardwoods as they burn more slowly allowing the smelters more control over the temperature. Making the charcoal was a task in and of itself. Local hardwood branches were collected and brought back to the village. Pits were dug and the bottoms filled with grasses that were then burned leaving a layer of warm ash. The branches were added and topped with a layer of wet grasses. This multi-layered cake of grass and sticks burned slowly for 24 hours to remove all the oxygen from the wood leaving only carbon, or charcoal. Carbon has a variety of allotropes, meaning that depending on how the carbon atoms are bonded to each other, it can have different characteristics. Diamond is carbon, just as charcoal, or the "lead" in your pencil. In this instance, carbon in the form of charcoal, provides as much as twice as much energy per kilogram burned than that of wood. More energy released means atoms and particles are moving faster, increasing the kinetic energy

and temperature. The next time you read a thermometer, remember, temperature is just an indicator of energy. The higher the temperature, the faster those submicroscopic particles are flying around.

Depending on the smelting process used, the amount of charcoal needed varied. Furnaces with bellows were found in areas with few trees. Less charcoal available meant these furnaces had to be very fuel efficient, with short operation times ranging from three to six hours. Contrarily only natural draft furnaces were found in areas plentiful with trees and operated for 20 to 48 hours (Killick, 2015) A small smelting furnace was recreated in 1978 with the help of locals passed down through generations. Approximately 95 kilograms of charcoal, made from 15 trees, 14 to 16 centimeters in diameter were used (Van Noten & Ravmaekers. 1988). The continued use of charcoal has bloomed into a profitable industry resulting in deforestation and resulting ecosystem impacts (Woollen, 2016).

The Science of Smelting

Ore, dug from shallow pits was



The periodic table of elements (Source: Wikimedia Commons)

preheated or roasted in a smoldering fire prior to being placed in the furnace. This helped to dry out and open the ore, increasing the surface area and opportunity for chemical reactions (Schmidt & Childs, Ancient African Iron Production, 1995). Chemically, it is a multi-step process starting with the incomplete combustion of charcoal to produce carbon monoxide (CO). This goes on to react with the oxygen in the ore to form carbon dioxide (CO2) and reduce the ore to a spongy mass of iron (Fe). Chemically, reduce means to remove oxygen. This process starts at 800 degrees Celsius and is shown by the balanced equations below.

> Incomplete combustion of charcoal $2C + O_2 \rightarrow 2CO$

As the temperature increases toward 1150 degrees Celsius, the unwanted minerals in the ore begin to melt and drop off the ore, falling to the bottom of the furnace forming slag, a waste product. Slag, like other waste and middens, are pivotal in dating furnace activities. By

Reduction of iron ore to iron bloom $Fe_2O_3 + 3CO \rightarrow 2Fe + 3CO_2$

carefully maintaining the temperature, hot enough to reduce but below the melting point, smelters ensured the production of spongy "bloom" (Van Noten & Raymaekers, 1988). When complete and the bloom retrieved, it was reheated and hammered repeatedly forcing out any remnants of slag producing wrought iron or low-carbon steel (Schmidt & Childs, Ancient African Iron Production, 1995).

Such precision is not needed when smelting oxides of copper and tin. The required temperatures are lower because less energy is needed to keep the elements bonded together. The metals are more easily reduced and explains why the Bronze Age usually precedes the Iron Age of any culture.

Africa's Puzzling Iron Age

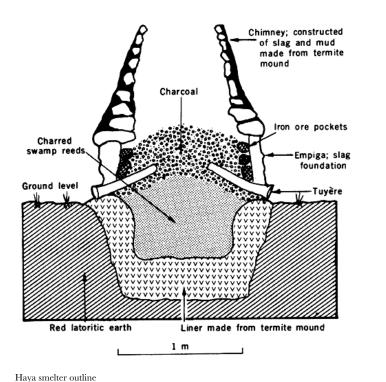
"All African iron-smelting processes recorded to date are variants of the bloomery process (Killick, 2015)."

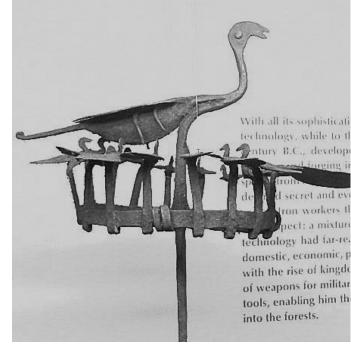
While it may be contested as to whether iron smelting originated in or was diffused to Africa, there is no doubt that African iron workers invented novel approaches to the smelting process. But why is the origin of historical iron smelting such a brain-teasing puzzle? The answer is it's complicated.

Before the 1960s, methods to scientifically date artifacts were nonexistent. This meant identifying and dating objects relied on inference. What was the object near? Was it similar to other objects? Not that inferences were wrong, but as so many of us have learned, our personal biases, if left unchecked, can make their way into our decision-making process. The advancement of radiocarbon dating helped alleviate some subjectivity, but not all.

As the name implies, radiocarbon dating relies on carbon, more specifically carbon-14, an unstable radioactive isotope that decays into very stable carbon-12 at a known rate. (Carbon-12 is so stable it is the basis for every atomic mass measurement in chemistry.) What's the difference between the two isotopes? Two neutrons. Carbon-14 has two more neutrons than carbon-12 atom, that's it, but it's those two neutrons that make it unstable, they have the hardest time staying crammed in carbon's nucleus so given the chance, they

63 · African Innovators: Solving Problems, Changing the Narrative





Iron Yorube rod relating to the patron saint / deity Osanyn (Source: NYC National History Museum)

are quick escape. The ratio of carbon-14 to carbon-12 in living beings mimics that in the atmosphere because way up there (points to the sun), carbon-14 is constantly created by cosmic rays and continually decaying into carbon-12. Organic beings here on Earth, be they plant, animal, or human, uptake carbon in the same ratios, like a radioactive meditation class. But when that being ceases breathe or photosynthesize, carbon-14 continues to decay but the carbon-12 well has gone dry, and the carbon ratios between the being and atmosphere no longer match. Scientists then compare an artifact's ratio with known values in time.

This analysis alone has its limits. There is a large plateau on the radiocarbon calibration curve for the dates ranging from 800 to 400 BC where more specific dates are not accurate leaving archaeologists in historical limbo. Further complicating radiocarbon dating are the artifacts sampled. Iron artifacts, be they slag or blooms; shovels or beads do not contain carbon. Therefore, organic material, such as the charcoal used in the furnace, is used to date adjacent iron objects. Somewhat akin to Aesop's statement, "A man is known by the company he keeps." And imagine the company spans thousands of years, across thousands of miles, and the company

could be one small fragment of an object.

Presuming an accurate correlation between two objects is challenging. Sites have been exposed and reused. Anthropologists such as David Killick, argue for more consistency and suggest the use of thermoluminescence (TL) on clay furnaces and accelerator mass spectrometry (AMS) on short-lived plant remains to confirm previous radiocarbon derived dates (Pringle, 2009).

The External vs Internal Debate

The debate on whether iron smelting technology was introduced into Africa or invented there brings to bear, the dates of artifacts, but it is important to put these dates into the context of the ebb and flow of people into and out of continents and regions. The typified regions are North Africa as it compares to West, Central, and East Africa. And the question is, "where did it start?"

Metallurgy timelines of Egypt are characteristic of the Middle East with copper dating back to the 4000 BC and bronze following in 3000 BC. But it was not until 600 BC that iron smelting appeared in Egypt (Scheel, 1989). Up the Nile in the ancient city of Meroe, iron smelting dates to 500 BC. Also, in

settlements at Carthage are not entirely understood, but working copper, bronze, and iron dates closely to 600 BC (Alpern, 2005). Those in the external source camp maintain that the complexity of and high temperatures needed for iron smelting that it must have relied on the bronze age for training, much like a toddler learning to toddle before it runs clumsily across the room, supporting the dispersion of technology from the north to West, East and Central Africa, where evidence of copper and bronze smelting has been shown to follow iron smelting.

North Africa, timelines of the Phoenician

Metallurgy began between 800 and 400 BC in West, East, and Central Africa. When comparing routes, dates, and technology for dispersion of technology from the north the other regions the numbers do not add up. This would mean zigzagging routes combined with immediate adaptation of technologies for local conditions. This gives credibility to iron smelting technology being developed in sub-Saharan Africa but presumes that iron metallurgy was mastered without the less complicated copper and bronze precursor. And this is not unthinkable. "The argument that smelting must

progress from less to more complicated metals contradicts even the way chemistry developed, which neither followed rules

Mark Pontoni **UNTANGLING BERLIN: IT'S IMPACT ON THE AFRICAN CONTINENT**

Despite their rich history that extends all the way back to the very origin of the human species, the people indigenous to the African continent are largely ignored in Western narratives of "World History." It is undoubtedly true that in recent years, perhaps spurred on by cries that "Black Lives Matter", the African story is finding its way slowly into those narratives. As I write this, however, the inevitable backlash to the changing narrative is playing out across the United States as some vocal minorities are attacking school boards and state legislatures in an attempt to limit the impact of such ideas as Critical Race Theory. Despite these attacks, the African story must be told and the role of racism in the existing narratives must be acknowledged.

For far too many students, the story of Africa is focused on the most recent two hundred years when Europeans exploited nearly every corner of the continent, first through the trade of enslaved people, and later through the theft of resources under colonialization and subsequently under neo-colonialization. The story of Africa, then, seems to begin when the enslaved began their perilous journey to the Americas and ends with the political, economic, and social struggles left behind by Europeans when they granted independence to their colonies.

In this paper, I will leave the narration of the pre-colonial African experience to others, though I strongly encourage all students of world history

to demand a full accounting of what was happening on the continent for thousands of years before Europeans arrived. The focus of this paper is on the social, economic, and political legacies of colonialism that too often seem to remain relevant in evaluating life in modern Africa. Fifty-four countries with fifty-four different stories defy simple analysis. In the aggregate, however, these fifty-four stories can give us clues to how those countries arrived at their current state.

Where Are We Now?

According to TheGlobalEconomy. Com, which ranks the political stability of nations around the world, only 10 African countries have a rating over zero in 2019. These are Botswana, Capo Verde, Mauritius, Seychelles, Namibia, Sao Tome & Principe, Rwanda, the Gambia, Ghana, and Senegal. On a scale of -2.5 to +2.5, all 54 countries average a -.64. For comparison, the 45 countries of Europe average a + .59 and only seven have a negative rating. These are Ukraine, Turkey, Russia, Bosnia & Herzegovina, Moldova, Serbia, and North Macedonia.

The temptation here, of course, is to point to a European bias in the data and that may well be valid. The website defines "Political Stability" as a way to measure "perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism. The index is

an average of several other indexes from the Economist Intelligence Unit, the World Economic Forum, and the Political Risk Services, among others." But in many important ways, perception is reality when it comes to the probability of future economic growth and development. (As a final point of reference which I believe lends credence to the index, of the 24 countries of North America, the United States ranks 14th. This would put it somewhere between Sao Tome & Principe and Rwanda on the scale.)

Another useful source of data comes from Transparency.Org which measures political corruption. Botswana is the highest rated African country at #35 in the world. (The United States is #25.) The bottom of the list is dominated by African countries and other countries like Yemen, Afghanistan, Syria, and Venezuela sprinkled in.

Again, while there is likely a European bias in this data, the perception exists that the political scene on the African continent is not very positive.

On the economic side, too, the picture isn't pretty. Of the World Bank's ten poorest countries, nine of them are in Africa (Somalia, Burundi, Malawi, Mozambique, Madagascar, Central Africa Republic, DR Congo, Sierra Leone, and Liberia) Only Afghanistan is on the list from outside of Africa.

How Did We Get Here?

Volumes have been written about how it is that a continent so rich in tradition and resources could be struggling so much politically and economically. Culprits range from the legacy of colonialism to the corrupt despots who have ruled some parts of the continent since decolonization. There's certainly enough blame to go around.

It is also undeniable that progress is being made, and you only need to look at the progress Rwanda has made since the horrors of genocide in the 1990s to where it is today to realize that there is nothing inherently permanent in the problems African countries face.

If we are honest about the European role in modern African struggles, we can easily start with the Berlin Conference of 1884-85. As European countries began to modernize under the Second Industrial Revolution, and as new actors (Germany and Italy) joined the hunt for resources and markets, they realized that fighting each other over access to the riches of Africa could be counterproductive. Why spend resources shooting at each other when we can use those same bullets to mollify African resistance?

Along with the United States and the Ottoman Empire, twelve European countries met to seek a way to exploit African rivers and resources with the least amount of belligerence towards each other. This conference essentially kicked off the notorious "Scramble for Africa" which left every square inch of African soil under European control except for Ethiopia and Liberia. Eventually lines were drawn where none used to exist and indigenous people, without their participation or consent, were handed over to the empires of Europe.

In the drawing of these lines, little or no regard was given to the people who occupied these lands. There are thousands of languages spoken

in Africa and there are thousands of ethnic groups who had cooperated and competed for thousands of years before any white man had set foot on the continent. Families, clans, ethnic groups were divided up in the European plunder. Existing political and social structures were ignored, and existing religious practices were demonized.

When decolonization finally came in the 1950s, 1960s, and 1970s, new African leaders faced a challenging dilemma: What to do about these arbitrary borders drawn for the exclusive benefit of Europeans? Early leaders of pan-Africanism struggled with this question. Julius Nverere of Tanzania and Kwame Nkrumah of Ghana were just two of the prominent leaders who grappled with the borders question. Conferences of African leaders failed to deliver a solution and African countries decided to maintain the borders drawn by European countries.

Many have written about the possible need to redraw the map of Africa along with the pitfalls such a plan might entail. Harvard Law School's Makau wa Mutua wrote a compelling study in the Michigan Journal of International Law in 1995 entitled "Why Redraw the Map of Africa: A Moral and Legal Inquiry". This is a great read on the issue and Mutua details the legacy of borders and the obstacles to overcoming that legacy.

Whatever the political borders of African countries might be, it seems that overcoming the social, political, and economic obstacles to growth and stability would still be difficult. This difficulty was born in colonization and it's not going to die anytime soon.

In the aftermath of the "Scramble for Africa" political entities were created that, for the most part, were administered through indirect rule. That is, European powers employed local elites to administer the colonies. With few exceptions, the colonial powers relied on these local elites to mollify the masses. Thus, while there

was certainly profound resistance to European imperialism throughout the continent, the European powers were able to execute their exploitation on the cheap. This required a certainty that indigenous people would never be able to band together to challenge European authority.

The tactics used by the Europeans, and then adopted by many of the leaders of newly independent African countries, leaned on the ethnic and language diversity of the people. Ethnicity is a complicated issue and is not particularly easy to define or identify, so care must be taken to avoid drawing simple conclusions.

In "Unbowed", Wangari Maathai explains the genesis of ethnic rivalries throughout Africa. "Ethnicity is one of the major strategies that politicians have used to divide Africans...! do not believe that people who have lived as neighbors for hundreds of years start attacking and killing one another with no provocation or support from those in power. What happens is that politicians stir people up and give them reasons to blame their own predicament on people from other ethnic groups. This terrible tragedy has cost Africa many lives and many years that could have been used to promote development."

It's not just the tragedy of lives lost that Maathai laments. Without a united people, it is very hard for countries to make economic progress. What's missing in many African countries is a sense of nationalism that exists in so many other places. Nationalism, of course, is not a guarantee of success, however that may be defined. I have argued before that nationalism is, in fact, at the root of much misery in this world.

Despite the pitfalls of nationalism, it is also indisputable that much of the success that European nations experienced in the 19th and 20th centuries was driven by nationalism. Ernest Renan's argument in "What is a Nation?" concludes that regardless of language, religion, ethnicity, etc., people can come together to solve problems once they believe they share a common destiny. Writing in the 1800s, he uses the United States as an example of what can be accomplished despite the diversity of a country's population.

Renan was trying to counter the arguments put forth by the Italian Guiseppe Mazzini who argued that in order for a nation to exist, it's people had to share language and other customs. Mazzini's argument was a powerful motivator in both the unification of Italy and Germany in the late 1800's and seems to be used to explain why it's so difficult for African nationalism to emerge. Large numbers of languages and ethnicity will prevent the development of nations. Yet, as Renan points out, diverse nations can come to see that they share a common destiny, and once that happens, the nation can grow.

Lesson Plan Ideas

This lesson covers three class periods.

• Day One:

As a refresher on the importance of the African continent in world history, students will play a geography game on Sporcle which asks them to identify the modern country where certain events, inventions, and discoveries happened first. Link to the game is here: https://www.sporcle.com/games/michmark/find-world-countries-copy-3 Teacher then displays maps showing various periods of African history: The early kingdoms/empires The pre-Conference of Berlin period The colonial period The post-colonial period Students will make observations about the political borders and how they changed. That concludes Day One. For homework, students are given two excerpts from The General Act produced at the Berlin Conference to read and annotate. Source document is here: http://www.waado.org/colonial rule/general documents/berlin act 1885.html

Excerpt I:

In the Name of God Almighty.

Her Majesty the Queen of the United Kingdom of Great Britain and Ireland, Empress of India; His Majesty the German Emperor, King of Prussia; His Majesty the Emperor of Austria, King of Bohemia, etc, and Apostolic King of Hungary; His Majesty the King of the Belgians; His Majesty the King of Denmark; His Majesty the King of Spain; the President of the United States of America; the President of the French Republic; His Majesty the King of Italy; His Majesty the King of the Netherlands, Grand Duke of Luxemburg, etc; His Majesty the King of Portugal and the Algarves, etc; His Majesty the Emperor of all the Russias; His Majesty the King of Sweden and Norway, etc; and His Majesty the Emperor of the Ottomans,

WISHING, in a spirit of good and mutual accord, to regulate the conditions most favourable to the development of trade and civilization in certain regions of Africa, and to assure to all nations the advantages of free navigation on the two chief rivers of Africa flowing into the Atlantic Ocean; BEING DESIROUS, on the other hand, to obviate the misunderstanding and disputes which might in future arise from new acts of occupation (prises de possession) on the coast of Africa; and concerned, at the same time, as to the means of furthering the moral and material well-being of the native populations; HAVE RESOLVED, on the invitation addressed to them by the Imperial Government of Germany, in agreement with the Government of the French Republic, to meet for those purposes in Conference at Berlin,

Excerpt II:

PROVISIONS RELATIVE TO PROTECTION OF THE NATIVES, OF MISSIONARIES AND TRAVELLERS, AS WELL AS RELATIVE TO RELIGIOUS LIBERTY

Article VI

All the Powers exercising sovereign rights or influence in the aforesaid territories bind themselves to watch over the preservation of the native tribes, and to care for the improvement of the conditions of their moral and material well-being, and to help in suppressing slavery, and especially the slave trade.

They shall, without distinction of creed or nation, protect and favour all religious, scientific or charitable institutions and undertakings created and organized for the above ends, or which aim at instructing the natives and bringing home to them the blessings of civilization.

Christian missionaries, scientists and explorers, with their followers, property and collections, shall likewise be the objects of especial protection.

Freedom of conscience and religious toleration are expressly guaranteed to the natives, no less than to subjects and to foreigners. The free and public exercise of all forms of divine worship, and the right to build edifices for religious purposes, and to organize religious missions belonging to all creeds, shall not be limited or fettered in any way whatsoever

Day Two:

- A brief discussion of the two excerpts starts the day. Teacher will ask questions to lead the discussion. They may include: • Who did not participate in the Berlin Conference?
 - What were the main goals of the European powers at Berlin?
 - How are the African peoples' concerns addressed?
 - To what extent does the document protect genuine religious freedom?
- Teacher will explain that because of the Berlin Conference, European countries were free to claim territories in Africa without interference from other Europeans.
- Teacher displays maps of Angola, the Gambia, and northern Africa and asks students to speculate on why borders are drawn the way they were.
- Teacher introduces the NatGeo mapmaking tool. Link is here: https://mapmaker.nationalgeographic.org/#/

• Students are assigned one general region of the continent and are encouraged to use the NatGeo tool to overlay various demographic, population, and resource slides. Their task is to "untangle Berlin" and redraw the map of their region attempting to respect religious, ethnic, language characteristics of the indigenous population.

Day 3:

- Students present their maps
- The class critiques the maps looking for positive aspects of the new map and raising possible problems with implementing that map.

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