

An indigenous environmental education curriculum for Brownsville, Miami

By

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Raquel graduated from Florida International University with a Bachelor's in International Relations and Liberal Studies and holds a certificate in South Asian studies. While at FIU, she served as a bridge between FIU students and the Sikh and Ahmadiyya Muslim Community to promote cultural and religious understanding. She interned at the International Rescue Committee where she assisted refugees find affordable housing and regularly volunteered at Lotus House, a home for victims of domestic violence. On graduation, she was awarded World's Ahead Scholar, a recognition given to individuals that exhibit outstanding academic achievement coupled with a passion for community service. After graduation she volunteered with Literacy NY tutoring adult students of English as a second language. Between 2004 and 2007, she volunteered in four medical missions to the island of St. Kitts/Nevis to promote colon cancer awareness. Her passion for learning has motivated her to develop a teaching module on Muslim scholars who made significant contributions in the fields of Science, Technology, Education and Medicine.

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Alison joined Educate Tomorrow in the fall of 2013 as a life coach for her mentee and for the Educate Tomorrow team. Alison was the CEO of the Belafonte TACOLCY center in Liberty City from 2006-2013, a center the she attended programs at during her childhood. Alison has had an impressive career marked by experiences in international community development work, education, ecotourism, community outreach, project management and marketing. Alison studied Radio and TV broadcasting at Miami Dade College, where she was inducted into the school's Hall of Fame in 2007. She earned a B.A. in speech communications/public relations from the University of South Florida, a MS degree in Hospitality Management from FIU, a Certificate from the Harvard Business School in Leadership Development and a M.S. Ed in Community and Social Change from the University of Miami in 2013.

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Iqbal, a resident of Brownsville, is an associate professor of Religious Studies in with a doctorate in Divinity from the University of Edinburgh. He has 20 years of experience in early childcare education in Louisiana as the chairman of the Children's College Foundation and is a Florida certified teacher for middle school Social Studies. He has a dual appointment in the departments of Religious Studies and Politics & International Relations in the Steven J. Green School of International and Public Affairs. He completed his doctorate at the University of Edinburgh's New College School of Divinity. His current work explores the origin of the Khojā peoples in the Subcontinent through extant oral traditions known as the *kahaṇī* in Sindhi, Gujarati, and Hindustani. He teaches both undergraduate and graduate courses as well as independent studies which include but are not limited to Islamic Political Thought, Advanced Interpretations of the Quran, Voice of the

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Alejandra is completing her final year at Duke University to earn a B.A. in Public Policy and Education, while pursuing her Elementary Education Certification. She is passionate about educational reform and the intersection of pedagogical practice and policy. Alejandra has worked directly with middle school students through a North Carolina nonprofit, *StudentU*, as well as contributed to curriculum publications for a Washington D.C. organization, *Population Education*. She plans to stay in Durham, NC upon graduation to teach 8th grade Social Studies.

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Roger is an urban gardening expert in Liberty City who provided insights into best practices, resiliency, and sustainability in education. He is a Florida Master Gardener and Director of Community Health Initiatives for Urban GreenWorks, addressing issues of food insecurity, justice, and population health.

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Fatimah is the second and third grade teacher at Clara Mohammed School in Miami for the 2019-2020 academic year. This school system established the first Islamic school more than 50 years ago and continues to serve the primarily African American Muslim communities in urban America. Ms. Bahdah's help as we implemented the curriculum as well assistance as we transitioned to Zoom during the pandemic was invaluable in providing feedback that guided curriculum development.

PROLOGUE

PLAYING OUTSIDE: A YOUNG GIRLS CONNECTION TO NATURE

Alison Austin

Growing up, I played outside all the time. When I pause and reflect on where my desire and appreciation for nature comes from, I realize that my joy has always been linked to being outdoors. I cannot remember a time when I was ever disconnected from nature. Perhaps, I was not. Perhaps my connection to nature begins, where I began.

I grew up in Liberty City in the 1960's. It was a simpler time. Most of the single-family homes in my neighborhood were owned by Black families where neighborhood children could play in both the front and back yards, with no fences to separate them. We could run from space to space finding our own connections to each other, and to the natural outdoors.

I played outside all the time. Being in nature, around nature, in touch with nature, has always been an intimate part of my life. I enjoyed climbing trees and feeling the grass between my toes. Nature's trinkets dictated what games we'd play. Large fig trees with vines to swing from, we fantasized being 'Tarzan-King of the Jungle'. Back then, there were no video games, home computers, internet or cable. For many, to be inside was punishment. To be outside was to be free – free from chores, homework, siblings, and your mama's mouth.

There was always lots of trees around. Sure, you had your native oak and pine trees, but fruit trees were everywhere. These trees weren't only good for climbing – with mangoes, oranges, limes, kumquat, avocado, coconuts, guavas, sapodilla and cherries – they provided the best midday snacks. It felt like you could survive living outside, simply from all the fruit trees in the neighborhood. One of my favorite things was climbing the coconut tree in the back yard – a daring task. The spiny trunk was high, skinny, curved and laden. The real prize, however, was reaching the fruit at the top and enjoying the many treats it produces -- macaroons, coconut candy, cakes and bread pudding.

Back then, even though the beach was less than 5 miles, it was a treat for us – a rare family trip. Splashing in the cool blue water and performing bare-foot splits in the sand was the ultimate playtime. Early on, I believe that I instinctively knew the value of nature, the energy I received from it, and the connection I craved. As I grew into my independence, one of my favorite things became going to the beach, very early in the morning. I like to arrive before the people and experience what it is to feel my toes in the sand and the sound of the waves crashing against the shore.

I played outside all the time, but I haven't always been able to articulate the impact nature has had on me. In fact, in writing this piece, I feel more aware, than ever before. Playing outside is like coming into myself again and again. I am recharged. Being enveloped in the power and energy of nature is magnetic literally and magical at the same time.

During the COVID-19 shelter-in-place, my consistent exercise has been walking the neighborhood. I am challenged to find a shady path because hurricanes and redevelopment have removed so many trees and vegetation, over the years, leaving the neighborhood barren of a true tree canopy and hot temperatures.

I played outside all the time and with inspiration from my grandma and mom, I inherited a love of plants and flowers. My grandmother, spent much of her time at our home, piddling with a variety of plants and herbs in the garden. Without *Home Depot* to purchase plants, it was not uncommon for her to stop and ask a stranger for a clipping from their yard. Following in their footsteps, I developed a butterfly garden in my backyard and during much of the year, it is my favorite room in the house. There are seven native and three exotic butterfly species that visit my backyard every year.

I played outside all the time, and through the non-profit, Communities in Bloom, I was able to turn this playtime into a passion for building community gardens in my very own neighborhood. Imbued with a passion to protect the environment, in 2004, I made an intentional decision to support the development of butterfly gardens in the Liberty City community. We were gifted several pieces of derelict lands from the Florida Department of Transportation (FDOT), including roadside dumps, and in partnership with Audubon of Florida, City of Miami and Fairchild Tropical Gardens, we created nature spaces and butterfly gardens throughout Liberty City.

For several years, residents and youth were exposed to the value of creating native, natural habitat and beautiful spaces in the urban core. 16 years later, as I drive through my community, I'm proud to see that what once was an eye sore, still blooms with native plants, aesthetically giving life to and softening the energy of the busy intersection – a place of peace and beauty.

This passion led me to Audubon of Florida, where I served as the Director of Outreach and Communication for the state of Florida. I refused to accept the notion that inner city youth had no interest in the environment and created the Urban Everglades Outreach Specialist (UEOS) youth leadership program. This initiative targeted inner city black and brown youth to help expose them to the wonders of local nature, landscape and civic responsibility. The hope was to create the next generation of environmentalist. Over five years, we helped build an appreciation and respect for nature with these young people. In fact, one of the graduates, now a physician, recently shared that driving by one of the gardens, left him nostalgic. To see it and remember that he was part of the original group that transformed a dump into a butterfly garden was a transformational moment of community pride. The success of UEOS is also one of my proudest moments to-date.

In my work today, I teach mindfulness and am grateful for the wisdom that nature teaches. I understand the power of nature to raise your vibrational energy, and make you feel good. When I'm feeling low and out of alignment, when I want clarity, I need to find myself somewhere in nature. I've always instinctively known its healing powers but sitting in stillness, as part of my mindfulness practice, it became clear. What brings me bliss? Playing outside.

INTRODUCTION

Zafreen Jaffery

This project started with conversations with the residents of Brownsville during an effort to revitalize the Glenwood Park as Brownsville Community Garden funded by the Public Space Challenge grant by The Miami Foundation. The Miami-Dade County's Department of Environmental Resources Management generous financial support brought about the development of the Brownsville Environmental Education Curriculum that focuses on the strengths and needs of students, teachers, and parents in three schools in Brownsville.

The goals of the curriculum were to:

- Preserve the linguistic and cultural heritage of indigenous and African American communities in the American South
- Promote an internationalized early childhood educational curriculum to expose students to the world's historical and religious diversity thereby promoting pluralism
- Develop community gardens, urban tree canopies, and expand the habitat of pollinators in Brownsville as well as conserve water, reduce dumping, encourage recycling
- Promote gardening and natural aesthetics among the youth of Brownsville as a way of teaching them marketable skills and combining trauma-focused treatments with horticultural therapy

Dr. Zafreen Jaffery led the curriculum planning and implementation team. Curriculum advisors and contributors consisted of Alison Austin, Chaundra Whitehead, Dr. Bina Sengar, Raquel Sedano, Dr. Iqbal Akhtar, and Roger Horne. The content for the curriculum draws from historical, textual resources, and an extensive body of scholarship that already exists on environmental education and preservation. However, this curriculum is unique as it focuses on those cultural aspects of children in these three schools, which are neglected in mainstream education. These factors were targeted but not limited only to the children's geographic location, gender, race/ethnicity, country of origin, and faith-based backgrounds. Topics such as Black pioneers in South Florida, Floribbean food culture, and Muslim scientists help to promote students' connection to a rich historical past and continue to build on their self-esteem, dignity, and identity.

The curriculum planning began in July 2019. Master Gardener Roger Horne installed three school gardens in Brownsville: Bethune Early Head Start, Clara Muhammed School, and Sheyes of Miami Early Learning Center # 3, in Fall' 2019. Once the gardens were installed, we conducted a needs assessment at the schools to gauge school capacity and teachers' self-efficacy. The hands-on, activity-based lesson plans were implemented in two schools in February 2020 while an IRB approval was delayed working in Bethune Early Head Start program. On March 17, 2020, nationwide school closures owing to the public health crisis caused by the novel coronavirus COVID-19, pushed the curriculum planning team to revise the curriculum to adjust for online instruction. Online classes focused on gardening, environmental preservation, and climate change were conducted via Zoom weekly until the end of the school year in June 2020.

Below are the divisions of the curriculum by sections:

- Section I: 'Environmental awareness through experimentation' by Zafreen Jaffrey
- Section II: 'Black Floribbean history, food, and farming' by Chaundra Whitehead
- Section III: 'Indigenous/Native Floridian history, food, and farming' by Bina Sengar
- Section IV: 'Muslim contributions to the natural sciences' by Raquel Sedano

This curriculum would not have been possible without the support of Miami-Dade County, the teachers, students, and parents in the three schools. The curriculum planning and implementation team devoted hundreds of hours in developing this culturally relevant, age-appropriate curriculum with input from teachers. The curriculum is a work in progress that will be improved through an iterative cycle of implementation and feedback. We welcome any feedback to make this work more relevant and appropriate for the needs of children and teachers in Miami and South Florida.

THE HISTORY OF BROWNSVILLE

Alejandra Gómez

HOW THE “COLOR LINE” SEGREGATED MIAMI

In the early decades of the 20th century, the City of Miami imposed a “color line” to keep African Americans segregated to a section of the city (Mohl, 2001). The result: the Black community in Miami continues to suffer disproportionately more than the white community today. Areas such as Liberty City, Brownsville, and Opa-Locka, predominantly Black communities, suffer from poverty, high unemployment levels, segregated housing, and poor schooling (Tscheschlok, 1995). Brownsville, an unincorporated community in Miami, formerly known as Browns Subdivision, had a total of 5,108 households in 2018. Of those, 87% were ALICE (Asset Limited, Income Constrained, Employed) or living in poverty, according to a report by the United Way of Miami-Dade County. This is the second-highest percentage of impoverished households in the city, trailing only behind Opa-Locka, a Black community adjacent to Brownsville. How did this come to be? The histories of these communities, despite being minimally documented, shed light on the racist policies which have led to the injustices that these communities still fight against today.

Jim Crow laws upheld separate but equal, ensuring that African Americans could not move into white suburbs to own houses, send their children to better public schools, have access to proper sanitary conditions, and so forth. In the early 1900s, each time African Americans tried to move across the “color line,” they were met with violence and resistance from the white community. Moreover, the local government decided they wanted to expand their relatively small central business district in Overtown, where much of the Black community lived, and built the Liberty Square housing project to move these families away. No input was considered from the residents who lived in Overtown; instead, when the project was completed in 1937, they were pushed out of their homes and forced to move further from the city center. This was intentionally designed to put greater physical distance between the white and Black areas of Miami and resulted in pushback from the African American community (Mohl, 2001).

THEY HAVE A DREAM

Like white families, Black families wanted to own homes. Prior to the mid-1940s, Brownsville was a community of middle-class, single-family homes for whites (Hines, 2020). That changed as Black families pushed on the boundaries of this neighborhood and began purchasing homes. Consequently, there was a wave of “white flight” in Brownsville and surrounding areas such as Liberty City. These neighborhood blocks adjacent to one another became one large Black district and continue to be a belt of nearly all Black residences today (Tscheschlok, 1995). Census data from 2010 revealed that the Brownsville community was 96% Black, 2% white, and 2% other races. A predominantly low socioeconomic status community with a high rate of crime, the Brownsville/Liberty City area accounted for 11% of all homicides in Miami-Dade County from 2004 to 2008 (Uchida et al., 2013). This is not coincidental, nor did it happen overnight.

While the history of this area is not well documented, there are records indicating that a local realtor by the name of Wesley E. Garrison is greatly responsible for the selling of Brownsville property to Black families. He bought homes and empty lots in the all-white neighborhoods, and then sold them to African Americans who wanted to fulfill their dreams of owning homes and businesses. But when they arrived at their new homes, they were met by cross burnings started by the Ku Klux Klan, and Garrison was arrested for violating the zoning ordinances which clearly stated Black buyers could not cross the “red line.” Garrison defended his Black clients, and the case went all the way up to the Florida Supreme Court, which eventually declared that Miami-Dade County racial zoning ordinances were unconstitutional.

To work around this, the Dade County Planning Board and commissioners recommended that existing black districts in Miami, Coconut Grove, Brownsville, and Liberty City be re-planned in order to create enough housing units for 26,000 African Americans. High rise concrete block apartment houses sprang up in the 1950s and 60s to accommodate all of these people, and overcrowding became an issue. Additionally, the County made other deliberate choices to force residents out, such as building a freeway through Overtown. The Greater Miami Urban League surveyed the areas where Black families lived in Dade-County and found that very clear patterns of segregation had been established (Mohl, 2001). Their reports also exposed the fact that Black housing was twice as overcrowded and ten times more dilapidated than white housing. In 1967, residents in Liberty City and Brownsville were still trying to obtain adequate street lighting and city water. Three years later, 30% of all families lived below poverty level. Business owners were also predominantly white, owning 70% of the local businesses, yet taking their profits with them to the white suburbs they inhabited (Tscheschlok, 1995). What began as a dream to own homes and start businesses, turned into inadequate living and an economically stagnant community.

HOW FAR WILL THEY GO?

A dark episode in August of 1968 is a testament to how far racial tensions stretched and endured. The Republican National Convention came to Miami and drew African American protests in response to their outwardly racist policies. When they organized a “Blacks Only” meeting to address community concerns, and white reporters showed up, the protestors refused them entry. The reporters described being banned violently and aggressively, leading a heavily armed police force to be dispatched to the area. Liberty City residents ransacked white businesses, and Florida Governor Kirk arrived on scene in an attempt to curb the violence. After minimal discussions with the neighborhood’s spokesmen, he promised to return the following day to sort out the tensions. When he failed to keep his promise the very next day, the community rallied together. By mid-afternoon, a crowd of 1,000 people stood outside the community council offices, demanding the Governor hear them out. Again, the police force was dispatched, killing three innocent civilians and injuring dozens more. While white newspapers described this uproar as a total surprise, yet Miami’s Black community understood that this had been inevitable and feared the situation would only continue to worsen (Tscheschlok, 1995).

THE HEROES WE SHOULD REMEMBER

Fortunately, there were many brave souls in the Black community who spoke out against the violence, racism, and injustices. Neal Adams of the Brownsville Improvement Association was vocal about the fact that tenets in their community did not receive proper accommodations and facilities but paid exorbitant prices to white landlords. This was a common issue; Black folks forced to pay more rent than the homes were even worth. Adams is credited with stopping mortgage foreclosures on numerous homes and creating job opportunities for many in need. He owned a well know business, Neal's Grocery Store, and gave a generous contribution for the creation of the Brownsville Improvement Aviation Community Center to assist other Black businessmen with their own professional endeavors. Moreover, Adams rallied the community together for voter registration drives in order to lobby country commissioners to install proper streetlights, paved roads, drainage, and other essential safety and sanitary improvements (Adams, Neal, *The Black Archives*, 1997-98).

There were also special places in the Black community; one in particular still stands out today as just recently it has been awarded a \$50,000 grant from the National Park Service to undertake a full survey of Brownsville and assess its historic significance (Hines, 2020). This place is called the Hampton House Motel. Formerly named The Booker Terraces, this historic landmark received its name after owners Harry and Florence Markowitz sponsored a contest to rename the motel and apartments. Mrs. Verneka Silva, a schoolteacher from Coconut Grove, won the contest and suggested the name "Hampton House." Famous characters who frequented this site include Martin Luther King Jr., Malcolm X, and Muhammad Ali, as well as the Congress of Racial Equality (CORE) Miami chapter (Mary Elizabeth Hotel and the Booker Terrace Motel, *The Black Archives*, 2004-05). In fact, it was at the Hampton House that Muhammad Ali, who changed his name from Cassius Clay after joining the Nation of Islam, celebrated his heavyweight championship of the world title against Sonny Liston on February 25th, 1964 (Hines, 2020). The National Park Service grant is a step forward in uncovering and documenting many of the other rich stories that are at the heart of communities like Brownsville.

Similarly, there were other Black owned businesses which prospered and were the talk of the town in the 1950s. Georgette's Tea Room was a high end meeting place for activities and a well-known guest house for famous visitors, including Billie Holiday and Nat "King" Cole (Georgette's Tea Room, *The Black Archives*, 1996). However, other businesses did not fare quite as well, such as the Dade-County's only black-owned hospital, Christian Hospital, which was forced to permanently close in 1982. It was founded with the financial assistance of a white woman, Mrs. Clarence Bush, and a new facility was built in Brownsville with the latest medical equipment in 1959. When other white-owned facilities began integrating towards the middle and end of the 20th century, the occupancy rates dropped (Christian Hospital, *The Black Archives*, 1994). Yet these are places and people worth remembering and celebrating. Future research and documentation should continue to uncover and share these stories, both within and beyond the community borders.

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ENVIRONMENTAL AWARENESS THROUGH EXPERIMENTATION

Zafreen Jaffery

LESSON 1: WHERE DO PLANTS LIVE?

GRADES: K-3

OBJECTIVES

- Examine where plants live.
- Identify what soil is made up of.
- Identify some animals and plants that live in soil.
- Measure soil using a measuring cup.
- Distinguish between parts of soil including sand, silt, clay, rocks, organic matter.

MATERIALS

- Bags of soil, sand and rocks.
- Mason jars
- Measuring cups
- Water

STEPS

Explain: “Start by telling students about the farming process. Start by telling them fruits and vegetables need soil, water and sunlight in order to grow. The first step of farming is preparing the soil to plant the seeds. The second step is to plant the seeds. The third step is to water the soil where the seed is planted. After some time, you will be able to harvest the product.”¹

Garden Visit: Take students to the garden. Let them touch the soil and explain texture to them. Explain how soil is habitat for plants. Explain different types of soil and what soil is composed of.

Experiment:² Give students bags of materials, let them touch and feel bags of rocks, shells and sand. Explain how soil forms by the weathering and decomposition of rocks to sand to soil. Pour soil into a jar of water by using a measuring cup, let it set and observe how parts separate.

Follow-Up: Explain how composting turns garbage (organic waste) to soil. Experiment with composting turning garbage into soil.³

VOCABULARY

Texture, habitat, composition, cultivation, sand, silt, clay, rotted plants, organic matter

¹ Let's Grow Together K-2

² http://www.soil-net.com/dev/page.cfm?pageid=casestudies_jamjar&loginas=anon_casestudies

³ Roger Horne Urban Gardening

REFLECTION

- What is one thing you learned about soil today?
- What is one thing you would like to learn about soil?

TRUTH AND DARE

- Truth: we share the planet with other living beings.
- Dare: this week, I dare you to be kind/nice to one living being be it plants, animals or another human being. Share what you did.

LESSON 2: WHAT DO PLANTS EAT?

OBJECTIVES

- Examine the difference between living and non-living beings.
- Identify what plants consume.
- Demonstrate with the help of an experiment how organic matter converts into plant food.
- Compare organic matter with rocks.
- Explain nutrients in the soil, sunlight and water.
- Measure soil using a measuring cup to add to compost.

MATERIALS

- Bags of soil, organic peels of bananas and oranges
- Mason jars
- Measuring cups
- Packets of plant food that is being sold at the florist

STEPS

Explain: “Start by telling students about the farming process. Start by telling them fruits and vegetables need soil, water and sunlight in order to grow. The first step of farming is preparing the soil to plant the seeds. The second step is to plant the seeds. The third step is to water the soil where the seed is planted. After some time, you will be able to harvest the product.”⁴

Garden Visit: Take students to the garden. Let them touch the soil and plants, ask them to think about the following questions:

- Are plants alive?
- Where do they live?
- What do they eat?
 - Sugar, water, sunlight, nutrients.
 - Soil needs enrichment and nutrients through organic matter and rocks decomposed overtime under high-pressure.

Remind them about how soil is home/habitat for plants. Remind them if plants are alive and they eat, we must nurture them, take care of them and protect them because they also provide food for us.

Experiment: Give students bags of materials, let them touch and feel bags of rocks. Let them peel and eat an orange, preserve peels. Let them mix two cups of soil in a jar, with fruit peels, ask them to imagine what will happen next.

Follow-Up: Explain how composting turns garbage or organic waste to soil. Experiment with composting turning garbage into soil.⁵

⁴ Let's Grow Together K-2

⁵ Roger Horne Urban Gardening

VOCABULARY:

- Sand, silt, clay, rotted plants, minerals, rocks, organic matter, decompose

REFLECTION

- What is one thing you learned about what plants eat today?
- What is one thing you would like to learn about plant food?

TRUTH AND DARE

- Truth: we share the planet with other living beings.
- Dare: this week, I dare you to be kind/nice to one living being be it plants, animals or another human being. Share what you did.

REFLECTION ON LESSON ONE

- Examine the contents of the jar filled with soil and water from the previous lesson.
- Discuss different constituent parts of soil.
- Explain different types of soil and what soil is composed of.

LESSON 3: HOW DO PLANTS LIVE? HOW DO PLANTS SURVIVE?

OBJECTIVES

- Identify what plants consume- sunlight, air, and water. Compare plants with other living beings.
- Demonstrate with the help of an experiment how sunlight can be converted into energy for use by humans.
- Explain how plants consume sunlight and channel the energy to grow and produce food.

MATERIALS

- Plastic Bottle
- L.E.D Light
- Solar Panel
- Water
- Bleach
- Sponge

STEPS

Explain: Remind students that plants need soil, water, air, nutrients, and sunlight to grow.

Garden Visit: Take students to the garden. Let them touch the soil and plants, ask them to think about the following questions:

- Do plants grow in water?
- Do plants drink water?
- How do plants drink water?
- What do you think water does for plants?

Explain parts of plants to the students: stem, roots, and leaves. Explain how plants absorb water through their roots even though the process may not be visible to us. They breathe air through their leaves and absorb sunshine through their leaves as well. Bring a plant that grows in water (e.g., Lucky Bamboo) to demonstrate to students that plants can grow in water. Bring an air plant like an Orchid to show that the roots of plants can be above the ground. Pass the plants around so that students can touch, feel and see.

Experiment:

- Soak a sponge and then wring it to demonstrate how a sponge absorbs water without a mouth. Explain how plants absorb water in similar ways.
- Screw the solar panel and light on top of the plastic bottle filled with water and bleach. The bottle of water diffuses the light. This is an example of how sunlight can be transformed into energy. Explain how plants use water, sunlight, and air to breathe and prepare their food.

VOCABULARY

- Conserve, save, conservation, absorb, absorption, solar energy, visible, invisible, orchid, bamboo.

REFLECTION

- What is one thing you learned about how plants survive?
- What is one thing plants need to live and grow?

TRUTH AND DARE

- Truth: we share the planet with other living beings. We need water. Plants and animals need water.
- Dare: this week; I dare you to save water. As you wash hands, pay attention to how much water is wasted when you are rubbing soap on your hands, and the tap is turned on. Can you turn the tap off? If you wash dishes, do you leave the water tap running throughout? If you water your lawn, do you let the water tap running for a long time?

REFLECTION ON LESSON TWO

Do you remember composting? What does composting do? What is organic matter?

LESSON 4: GROWING PLANTS-STRUCTURE (PARTS OF PLANTS) AND SURVIVAL (WHAT DO THEY NEED TO GROW)

OBJECTIVES

- Identify parts of plants focusing on flowers, its structure, smell and purpose
- Identify flowers that grow year-round to flowers that grow in spring explaining different seasons
- Identify what do plants need to survive focusing on wind and water
- Build a terrarium with students. Demonstrate plant growth in a terrarium over-time
- Explain wind-direction in a terrarium and how plants use wind to produce oxygen
- Explain water-cycle in the terrarium
- Develop increased ability to observe objects and phenomenon in their environment

MATERIALS

Fresh flowers from the garden or potted plants with flowers; Discovery Weather Terrarium Kit- small rock, potting soil, coloring flowers page

STEPS

Begin by asking students questions from the week three reflection section below. By this time, your school garden should have some plants flowering. Take students to the garden. Flowers are the mechanism by which plants grow. Parts of flowers develop into fruit containing seeds. Flowers attract animals like butterflies or other insects (e.g., bees) who carry pollen to other flowers for fertilization, resulting in reproduction which turns the flower into seed and fruit. Some plants need wind to carry its pollen to other plants. Other plants need insect who eat their pollen. Plants need seeds to grow.

GARDEN VISIT: Take students to the garden. Let them touch the soil and plants, ask them to think about the following questions:

- What Do You Like About Plants?
- Do you like flowers?
- What are flowers for?
- Can you smell flowers?
- What are different names for flowers?
- What is your favorite flower? Do you give flowers?
- What do plants need to grow?
- Do flowers have different colors?
- Can you eat flowers?

Explain parts of plants to the students: stem, roots, leaves and flowers. Bring a potted flowering plant to demonstrate parts of a plant, including flowers. Pass the plants around so that students can touch, feel, see and smell. Younger children can color flowers. ⁶

EXPERIMENT

Build a terrarium by following directions on the packet. Explain how this will help the students in understanding how plants use water, understand water cycle. Soil has water which will collect on the sides on the container as mist or moisture.

- Use this link to demonstrate to the students how to build a terrarium <https://www.youtube.com/watch?v=tdm6ooirjiw>
- Use this link to build your own terrarium <https://kidsgardening.org/garden-activities-building-a-terrarium/>

VOCABULARY

- Ecosystem- place where animals, plants, other micro-organisms (e.g., virus and bacteria) live together, edible flowers, pollen, pollination, terrarium- a miniature garden growing inside of covered glass or plastic container
-

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<http://www.makinglearningfun.com/t.asp?b=m&t=http://www.makinglearningfun.com/Activities/Flowers/Marigolds/MarigoldMAGNET.gif>

REFLECTION

- What is one thing you learned about flowers?
- What is one thing plants need to live and grow?

TRUTH AND DARE

- Truth: we share the planet with other living beings. We need air. Plants and animals need air.
- Dare: this week; I dare you to think about the air you breathe. As you breathe the air, think about is it clean? Does it smell? What does it smell like? How can you keep it clean?

REFLECTION ON LESSON THREE

Do you remember what plants need to grow? Do you remember sunshine? What does it do? Why do plants need sunshine? Can plants grow in water?

- Describe parts of a seedling: seed coat, cotyledons, root, shoots

CONNECT TO PREVIOUS LEARNING: Remind students about learning from the previous class about flowers and flower parts.

MATERIALS

- Dry red beans
- Paper towel
- Empty glass container
- Plastic bag
- Soil

EXPERIMENT: Growing beans in a plastic bag

- Place some dry red beans in a jar of water overnight. Take the seeds out of the water, wrap them in a paper towel. Put the paper towel in a plastic bag and leave a windowsill which has direct sunlight for a few days. Check the bag after a few days; the seeds would have begun the process of germination. Plant the seedlings into an empty glass container with some soil. A plant will start growing. Explain the stages of seed germination through this experiment.

EXPLAIN

- Plants grow from seeds through a process which is called seed germination. Seeds germinate when they have favorable environmental conditions. They need water, sunlight, air, and soil to grow. The seed in the experiment absorbs water from being soaked overnight. It also absorbs water from the wet paper towel, oxygen from the air, and sunlight by being in the windowsill.
- The embryo breaks through the seed coat. First, the root comes out of the seed. When planted in soil the root will begin to absorb nutrients and water from the soil. Next, the shoot comes

out of the seed and starts to grow towards the sun. The first pair of the leaves that come out of the shoot are called cotyledons. The shoot develops into the stem. A young plant is called a seedling or a sapling.

- Some seeds grow in the soil, others in the water, and some can grow in a plastic bag in a paper towel. They need all the right elements to grow.

VOCABULARY:

Germinate, germination, embryo, seedling, sapling, cotyledon, nutrients

REFLECTION

- What do you see when you see the seed in the paper towel after a few days?
- How do plants grow?

TRUTH AND DARE

- Truth: We share the planet with other living beings. We need each other to survive.
- Dare: This week; have one of the students suggest a dare.

RESOURCES

<https://www.fullbloomgreenhouse.com/how-to-germinate-seeds/>

<https://www.pinterest.com/pin/15833036175065900/>

LESSON 6: POLLUTION

OBJECTIVES

- Define pollution
- Define different types of pollution such as water, air, and land pollution
- Define water pollution and examine how plants absorb nutrients from the soil, in this case, water which is colored with food dyes

CONNECT TO PREVIOUS LEARNING: Remind students about learning from the previous class about seeds and germination. Remind them that plants need favorable environmental conditions to survive.

MATERIALS

Stalks of fresh celery, water, containers, food colors red and blue

EXPERIMENT

- Bring some celery and glass containers filled with water to the class. Bring some food colors and ask students what they think will happen. Demonstrate in front of the students and bring some celery stems soaked in water colored with different food colors overnight. Demonstrate that plants absorb water through their roots or pores within the surface of the stem or the leaves. Vascular tissue helps plants to absorb water and nutrients through the stems and the leaves. If there is some pollution in the water, something unclean, some materials or elements, plants will drink and absorb it. Once plants drink the colored water, then they will carry the pollution within them. -Notice how the veins of celery are colored with impurities from water stained with food color.

EXPLAIN

- Pollution is when something makes the land or water or air unclean, dirty or unhealthy. Plants and animals are affected by pollution.
- Plants absorb water and pull it up through their veins. If the water is polluted, then the impurities will become visible in the stalks and leaves. Water must be kept clean so that pollution does not become a part of the animal and plant life.

VOCABULARY

Impurities, nutrients, absorption, pollution

REFLECTION

- What did you observe about the leaves and veins of celery? Was there any change in color?
- What bodies of water can you think of in and around Miami that needs to be protected from pollution?

TRUTH AND DARE

- Truth: We share the planet with other living beings. We need each other to survive.
- Dare: This week, have one of the students suggest a dare.

RESOURCES

<https://msnucleus.org/watersheds/tule/plantstguid.html>

<https://study.com/academy/topic/pollution-lesson-plans.html>

<https://www.naturalbeachliving.com/teaching-kids-about-pollution/>

<https://www.nationaljewish.org/cehc/lesson-plan-packets/elementary-school-plans>

<https://moretime2teach.com/change-the-way-your-kids-think-about-pollution/>

<https://www.theworldcounts.com/stories/What is Pollution for Kids>

LESSON 7: WHY DO YOU KNOW ABOUT BIRDS? WHAT SOUNDS DO YOU HEAR WHEN YOU ARE OUTSIDE?

OBJECTIVES

- Observe the natural environment using their senses of sight and hearing
- Identify birds and bird songs
- Gain a better understanding of and respect for the natural world
- Learn about bird identification, bird behavior, habitats, and conservation
- Understand the inter-relationships and inter-dependencies of birds and plants

MATERIALS

- Pinecones
- String
- Hard core inside a toilet paper roll

STEPS

Explain: Remind students how a seed germinated into a plant and continues to grow. Remind them of the growth cycle from seed-germination-sapling-plant.

Virtual Garden Visit: Take students on a virtual garden visit to Portland Japanese Garden via Facebook. Ask students to use their sense of observation, such as sight and hearing, to report on what they see and what they hear. Ask students the difference and similarities between plants and birds. Plants and birds are living beings. They need air, water, and sunshine to grow. Birds eat plants, grains, nuts, seeds, and fruit nectar. Big birds eat small animals such as rodents. Birds have feathers that allow them to fly and keep them warm. Discuss the distance birds travel to find food and shelter. Play a video of bird songs so that students can see the bird, recognize its unique features, and discuss its unique songs.

EXPERIMENT

- Show students how to make a bird feeder using a toilet paper core, smeared with peanut butter and crushed nuts. Students can also use a pinecone to do so. They must attach the pinecone with a string before beginning to smear it with peanut butter.
- Light a candle. Cover it with an empty glass container to show smoked air trapped inside. Explain to students the difference between clean air and polluted air. Remind them that birds, plants and humans all need clean air to breathe.

VOCABULARY

Visible, invisible, soar, flap, conservation, extinct, rare, migration, habitat

REFLECTION

- What sounds do birds make? Are they all the same?
- What is one thing different between plants and birds?

TRUTH AND DARE

- Truth: We share the planet with other living beings. We need water. Plants and animals need water.
- Dare: This week; I dare you to observe birds, listen to their unique sound and see if you can imitate it.

REFLECTION ON LAST WEEK'S LESSON

- Do you remember the dare? Did you pick up any trash?

RESOURCES

Portland Japanese Garden

<https://www.facebook.com/PortlandJapaneseGarden/videos/650772262426954/>

15 Birds and bird songs for beginners

<https://www.youtube.com/watch?v=RHnzqKfxSQw>

Teaching young children about birds

<https://www.weareteachers.com/teaching-about-birds/>

Mass Audubon Resources for Teachers: Our Feathered Friends

<https://www.massaudubon.org/content/download/13465/209556/file/PreKTeachingUnit-BIRDS.pdf>

LESSON 8: WHAT IS AN OIL SPILL? WHAT HAPPENS TO THE OCEAN AFTER AN OIL SPILL?

OBJECTIVES

- Describe the natural ocean environment using their memory and a virtual tour
- Identify ocean life, aquatic birds (e.g., sea birds), animals (e.g., turtles, dolphins) and plant life (e.g., coral)
- Gain a better understanding of and respect for the natural world
- Learn about ocean oil spills, and their impact on the environment
- Learn about the importance of water and water conservation
- Learn about what is soluble and insoluble in water
- Learn what sinks and floats in water

MATERIALS

- Plastic animals
- Food color
- Water
- Oil
- Cocoa powder

STEPS

Connect to Previous Learning: Remind students how a seed germinated into a plant and continues to grow. Remind them of the growth cycle from seed-germination-sapling-plant. Ask them about observation and feeding of birds.

Virtual Beach and Ocean Visit: Ask students to use their sense of observation, such as sight and hearing, to report on what they see and what they hear when they visit the ocean. Discuss the visible sights and scenes on the beach. Discuss the invisible sights and scenes in the ocean.

EXPERIMENT

- Take students on a virtual simulation of a beach in a salad bowl. Fill the salad bowl with water and blue food color. Blend oil with cocoa powder. Use a soap dish as a barge filled with oil. Place plastic aquatic birds and animals. Turn the barge containing oil upside down to create the spill.
- Ask students what happens during and after the spill. Ask them how they would clean up the spill. Demonstrate with spoons, sieve and paper towels how difficult it is to clean up spills.
- Discuss the importance of preventing oil spills in the ocean to preserve plant, and animal life.
- Children can dissolve sugar, flour, oil, salt and other household items in water to see what dissolves and what does not.
- Children can float parts of fruits with peels and without peels to see what floats and what sinks. Discuss the density of molecules compared to the surface area allows fruits to sink or swim.

VOCABULARY:

Visible, invisible, ecosystem, habitat, conservation, simulation, soluble, insoluble

REFLECTION

- What do you see when you go to the beach?
- What do you hear when you go to the beach?
- What is one thing different between beach birds and land birds?
- What animals and plants are in the ocean?

TRUTH AND DARE

- Truth: We share the planet with other living beings. We need the ocean. Plants and animals need the ocean to survive.
- Dare: This week; I dare you to pick up trash from your environment.

REFLECTION ON LAST WEEK'S LESSON

Do you remember the dare? Did you imitate any bird sounds?

RESOURCES

Virtual Tour - Waikiki Beach, Oahu, Hawaii

<https://www.youtube.com/watch?v=Ztdyua06jpA>

Tropical Reef Camera Powered by Explore.Org

<https://www.youtube.com/watch?v=F10gTZt3nRc>

H₂O: The Molecule That Made Us - Preview

<https://www.pbs.org/video/molecule-made-us-preview-xnwi5v/>

10 Hands-On Science Projects to teach about pollution

<https://www.plt.org/educator-tips/science-projects-pollution/>

The Coalition for Science After School

<http://scienceafterschool.blogspot.com/2012/07/oil-spill-connecting-stem-activities-to.html>

LESSON 9: HOW TO PROTECT OZONE LAYER, SOLAR BEARS AND SEAGRASS?

OBJECTIVES

- Describe the natural ocean environment using their memory and a virtual tour
- Identify ocean life, aquatic birds (e.g., sea birds), animals (e.g., turtles, dolphins) and plant life (e.g., coral)
- Gain a better understanding of and respect for the natural world
- Learn about the importance of seagrass and their impact on the environment
- Learn about what is soluble and insoluble in water
- Learn what sinks and floats in water

MATERIALS

- Water
- Glass jars or cups
- Water
- Oil
- Measuring spoons

STEPS

- Connect to previous learning: remind students about the experiment with the oil spill. Ask them does oil dissolve in water. If they remember, ask why.
- Virtual beach and ocean visit: ask students to use their sense of observation, such as sight and hearing, to report on what they see and what they hear as they watch the video of the ocean. Discuss the invisible sights and scenes in the ocean.

EXPERIMENT

- Take students on a virtual simulation of a beach in a salad bowl. Fill the salad bowl with water and blue food color. Blend oil with cocoa powder. Use a soap dish as a barge filled with oil. Place plastic aquatic birds and animals. Turn the barge containing oil upside down to create the spill.
- Ask students what happens during and after the spill. Ask them how they would clean up the spill. Demonstrate with spoons, sieve and paper towels how difficult it is to clean up spills.
- Discuss the importance of preventing oil spills in the ocean to preserve plant, and animal life.
- Children can dissolve sugar, flour, oil, salt and other household items in water to see what dissolves and what does not.
- Children can float parts of fruits with peels and without peels to see what floats and what sinks. Discuss the density of molecules compared to the surface area allows fruits to sink or swim.

VOCABULARY

Visible, invisible, ecosystem, habitat, conservation, simulation, soluble, insoluble

REFLECTION

- What do you see when you go to the beach?
- What do you hear when you go to the beach?
- What is one thing different between beach birds and land birds?
- What animals and plants are in the ocean?

TRUTH AND DARE

- Truth: We share the planet with other living beings. We need the ocean. Plants and animals need the ocean to survive.
- Dare: This week; I dare you to pick up trash from your environment.

REFLECTION ON LAST WEEK'S LESSON

Do you remember the dare? Did you imitate any bird sounds?

RESOURCES

Virtual Tour - Waikiki Beach, Oahu, Hawaii

<https://www.youtube.com/watch?v=Ztdyua06jpA>

Tropical Reef Camera Powered by Explore.Org

<https://www.youtube.com/watch?v=F109TZt3nRc>

H₂O: The Molecule That Made Us - Preview

<https://www.pbs.org/video/molecule-made-us-preview-xnwi5v/>

10 Hands-On Science Projects to teach about pollution

<https://www.plt.org/educator-tips/science-projects-pollution/>

The Coalition for Science After School

<http://scienceafterschool.blogspot.com/2012/07/oil-spill-connecting-stem-activities-to.html>

LESSON 10: WHAT IS THE ARCTIC?

OBJECTIVES

- Describe the arctic environment through a virtual tour
- Identify plant and animal life
- Gain a better understanding of and respect for the natural world
- Learn about the importance of arctic
- Identify the vibrant colors, designs, and patterns of plants and animals in the arctic
- Reinforce the concepts of ecosystem, habitat, adaptation, preservation

CONNECT TO PREVIOUS LEARNING

- Remind students about learning from the previous class protecting habitat for animals and preserving the ozone layer.
- What have we seen and heard in the previous classes?
- What is the ozone layer? What function does it serve?

VIRTUAL RAINFOREST VISIT: Ask students to use their sense of observation, such as sight and hearing, to report on what they see and what they hear when they see the arctic. Discuss the visible sights and scenes. Discuss the invisible sights and scenes.

DISCUSS

Discuss two pieces of artwork and engage students in a conversation to explore the art:

- What do you see? What patterns, shapes, colors, and sizes do you see?
- What does that make you feel?
- Do you hear any sounds?

EXPLAIN

The arctic is an ecosystem that hosts animals, plants, insects, and non-living things, for example, water, ice, etc. Examples of ecosystems are frozen oceans, and forests. A habitat is the home of an animal or a plant. There are two main types of habitat, land and water habitats. Animals adapt to fit their habitat. For example, polar bears have thick fur to live in the cold. Giraffes have a long neck to nibble the leaves of tall trees.

VOCABULARY:

Ecosystem, habitat, conservation, species, adaptation, biodiversity, vibrant

REFLECTION

- What do you see when you see the arctic?
- What living and non-living things are visible in the virtual tour?

TRUTH AND DARE

- Truth: We share the planet with other living beings. We need each other to survive.
- Dare: This week; have one of the students suggest a dare.

REFLECTION ON LAST WEEK'S LESSON

- What do you remember about rainforests?
- Can you tell me what is a habitat?

RESOURCES

<https://www.youtube.com/watch?v=DXxzmCFwTI>

<https://study.com/academy/lesson/facts-about-the-arctic-lesson-for-kids.html>

<https://www.nationalgeographic.com/animals/photos/arctic-animals/>

Habitat Lesson Plan

<https://www.abcteach.com/Desert/habitats2.htm>

Ocean Habitats

<https://kids.britannica.com/kids/article/ocean/346185>

LESSON 11: WHAT DOES THE EVERGLADES LOOK LIKE?

OBJECTIVES

- Describe the Florida everglades through a virtual tour
- Identify plant and animal life
- Gain a better understanding of and respect for the natural world
- Learn about the importance of the everglades
- Identify the vibrant colors, designs, and patterns of plants and animals in the everglades
- Reinforce the concepts of ecosystem, habitat, adaptation, preservation
- Describe a Native American chickee stilt house

CONNECT TO PREVIOUS LEARNING: Remind students about learning from the previous class protecting habitat for animals and preserving the ozone layer.

- What have we seen and heard in the previous classes?

VIRTUAL RAINFOREST VISIT: Ask students to use their sense of observation, such as sight and hearing, to report on what they see and what they hear when they see the arctic. Discuss the visible sights and scenes. Discuss the invisible sights and scenes.

DISCUSS

- Discuss two pieces of artwork and engage students in a conversation to explore the art:
 - What do you see? What patterns, shapes, colors, and sizes do you see?
 - What does that make you feel?
 - Do you hear any sounds?

EXPLAIN

- The Everglades are an ecosystem that host animals, plants, insects, and non-living things, for example, water, ice, etc. Examples of ecosystem are frozen oceans, and forests. A habitat is the home of an animal or a plant. There are two main types of habitat, land and water habitats. Animals adapt to fit their habitat. For example, mangroves roots have adapted to them

VOCABULARY:

Ecosystem, habitat, conservation, species, adaptation, photosynthesis

REFLECTION

- What do you see when you see the arctic?
- What living and non-living things are visible in the virtual tour?

TRUTH AND DARE

- Truth: We share the planet with other living beings. We need each other to survive.
- Dare: This week; I dare you to look at all the plastic in the house. Think of ways in which you can do away with that plastic.

REFLECTION ON LAST WEEK'S LESSON

- What do you remember about the arctic?
- Can you tell me what is a habitat?

RESOURCES

National Geographic Video on Everglades

<https://www.youtube.com/watch?v=HPrPtCns5Lc>

Florida Everglades Nature Boom Time Video

<https://www.youtube.com/watch?v=uGmaeRlk5JU>

Native American Houses

<https://www.warpaths2peacepipes.com/native-american-houses/chickee.htm>

Smithsonian Mangroves

https://ocean.si.edu/ocean-life/plants-algae/mangroves#segment_3869

LESSON 12: WHAT IS A RAINFOREST? WHY DO WE NEED RAINFORESTS?

OBJECTIVES

- Describe the rainforest environment through a virtual tour
- Identify plant and animal life
- Gain a better understanding of and respect for the natural world
- Learn about the importance of rainforests
- Identify the vibrant colors, designs, and patterns of plants and animals in the rainforest

CONNECT TO PREVIOUS LEARNING: Remind students about learning from the previous class protecting habitat for animals and preserving the ozone layer.

- What have we seen and heard in the previous classes?
- What is the ozone layer? What function does it serve?

VIRTUAL RAINFOREST VISIT: Ask students to use their sense of observation, such as sight and hearing, to report on what they see and what they hear when they see the rainforest. Discuss the visible sights and scenes. Discuss the invisible sights and scenes.

DISCUSS

Discuss two pieces of artwork and engage students in a conversation to explore the art:

- What do they see? What patterns, shapes, colors, and sizes do they see?
- What does that make you feel?
- Do you hear any sounds?

EXPLAIN

Rainforests are forests characterized by continuous rainfall. More than half of the world's plants and animal species are indigenous to the rainforest. Lots of natural medicines are discovered in rainforests. They are an ecosystem as they host animals, plants, insects, and non-living things, for example, water, soil, sand etc. Examples of ecosystem are oceans, and forests. A habitat is the home of an animal or a plant. There are two main types of habitat, land and water habitats. Animals adapt to fit their habitat. For example, polar bears have thick fur to live in the cold. Giraffes have a long neck to nibble the leaves of tall trees.

VOCABULARY:

Ecosystem, habitat, conservation, species, adaptation, biodiversity, vibrant

REFLECTION

- What do you see when you see the rainforest?
- What do you hear when you go on a virtual tour of the rainforest?
- What living and non-living things are visible in the virtual tour?

TRUTH AND DARE

- Truth: We share the planet with other living beings. We need each other to survive.
- Dare: This week; have one of the students suggest a dare.

REFLECTION ON LAST WEEK'S LESSON

- Do you remember the dare?
- Did you imitate any bird sounds?

RESOURCES

<https://kids.britannica.com/kids/article/habitat/399492>

<https://kids.britannica.com/kids/article/ecosystem/433377>

<https://www.youtube.com/watch?v=JEsV5rqbVNO>

<https://kids.nationalgeographic.com/explore/nature/habitats/rain-forest/#/red-eyed-tree-frog-on-leaves.jpg>

https://instaar.colorado.edu/outreach/trees-and-vocs/trees_and_air_quality.html

https://www.youtube.com/watch?v=KMdD6TTDZ_g

<https://www.youtube.com/watch?v=BO4UYhhU-8c>

<https://www.youtube.com/watch?v=3vijLre76ow>

BLACK FLORIBIAN HISTORY, FOOD, AND FARMING

Chaundra Whitehead

LESSON 1: BLACK CAESAR (THERE IS ANOTHER JOHN BLACK CAESAR- AUSTRALIA, 1763-1796)

EXPLAIN

Black Caesar was an African slave-turned-pirate who operated in the waters off south Florida during the early eighteenth century. The legends say that for nearly a decade, he raided ships off the coast of Florida. Before his life at sea, Black Caesar was an African tribal war Chieftain. Widely known for his "huge size, immense strength and keen intelligence," he evaded capture from many different slave traders. Caesar was finally captured when he and twenty of his warriors were lured onto a ship by a slave trader who promised to show them watches, silk scarves and jewelry. Once they were on the ship the captain raised the anchor and slowly sailed away. Black Caesar and his warriors tried to fight back, but the sailors were armed. They were forced to accept their fate. As they neared the coast of Florida a hurricane began to develop which could destroy the ship on the Florida Reefs. A sailor, who had befriended Black Caesar, realized the ship was in danger. The sailor snuck below decks and freed Caesar. The two then forced the captain and crew into a corner and boarded one of the lifeboats with ammunition and other supplies. The wind and waves pushed them to shore where they waited out the storm, apparently the only survivors of the doomed ship.

Once on the small island in the Florida Keys, the two began to pose as shipwrecked sailors whenever another ship would pass. They would sail out to the ship, pretending to need help, then once they were aboard the ship, they would demand supplies. The two of them continued this for several years and gained many treasures. Over time they also had other pirates to join them and they were able to gain larger ships to go out to sea. It is thought that he and his men buried 26 bars of silver on Elliott Key, although no treasure has ever been recovered from the island.

Black Caesar used the mangrove swamps of Elliot Key as his personal haven until he joined forces with the notorious English pirate Blackbeard. During the early 18th century, Caesar left Biscayne Bay to join Blackbeard in raiding American shipping in the Mid-Atlantic. Black Caesar was a lieutenant on Blackbeard's flagship Queen Anne's Revenge. In 1718 Blackbeard's died in a battle with Lieutenant Robert Maynard at Ocracoke Island. Black Caesar was then taken prisoner by Virginian colonial authorities, he was convicted of piracy and hanged (punished with death) in Williamsburg, Virginia

QUESTIONS

- Have you ever been near the ocean or sea? When?
- What do you know about pirates?
- A mate or matey is a person who worked on a ship. What type of jobs do you think mates had on the pirate ships?
- How do pirates know what direction they are going when they are at sea?
- Why did pirates bury treasures? What types of things were in the treasure chests?

RELATED TOPICS/LESSONS

Maps, Navigation, Compass, The Florida Keys, Parts of the ship, Distance, Atlantic Ocean, Caribbean Sea, Piracy, Jolly Roger, Plunder, Matey, Booty

YOUTUBE

Black Caesar - Black Pirate (1600-1700s)

<https://youtu.be/hCyCBLCB7Kc>

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https://depaul.digication.com/Devinleigh/Primary_source_analysis_of_a_historical_figure_nam

Lyons, D. C. (2017, January 3). The Legend of Black Caesar still haunts the Florida Keys. *The Florida Rambler*. Retrieved from <https://www.floridarambler.com/historic-florida-getaways/pirate-black-caesar-florida-keys/>

McCarthy, K. M. (1994). *Twenty Florida Pirates*. Sarasota, Florida: Pineapple Press. (p.39-41).

IMAGES



Figure 1: Image of Black Caesar from *The Florida Rambler*

<https://www.floridarambler.com/historic-florida-getaways/pirate-black-caesar-florida-keys/>

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Figure 2: Drawing of Black Caesar from Daily Kos



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Figure 3" Example of a ship from the late 1700's

⁷ <https://www.dailykos.com/stories/2020/4/17/1922904/-Black-Kos-Week-In-Review-Black-Caesar-The-Real-Pirate-Of-The-Caribbean>

LESSON 2: FLORIDA HIGHWAYMEN

EXPLAIN

The Florida Highwaymen are a group of 26 African American landscape artists in Florida who made a living selling landscape paintings from the 1950s – 1980s. They were called the Highwaymen because they often sold their work from the trunks of their cars along the eastern coastal highways (A1A and US 1). Many of the Highwaymen were artists who were originally laborers in the orange groves of Florida. They discovered painting was a better way to make money. The Highwaymen were known for their resourcefulness, speed and creativity. They used various materials to paint on- wood, fiberboard and canvas. Sometimes they used crown molding to create frames. They created paintings very quickly, often selling them before oil paint was dry. These low-cost materials combined with the short time taken to complete and sell each work allowed the artists to make a profit. They created over 200,000 paintings.

A.E. “Beanie” Backus, was a trained artist and is considered the godfather of the Highwaymen. Alfred Hair worked for Backus and as a studio assistant in 1954 and soon began making and selling paintings. The group of artists began to grow from there, with Backus and Hair training other artists. The artists were not permitted to show and sell their paintings at galleries, art shows and other venues. The Highwaymen found a solution and they sold their works on the sides of roadways. They would also travel door-to-door and frequented churches and offices. One of the Highwaymen, Harold Newton, was known to sell his paintings on his bicycle along Florida’s U.S. Highway 1. Tourists purchased the paintings as souvenirs because they presented beautiful Florida scenes and they were inexpensive. Many of the paintings included Florida scenes with coastal sunsets, palm trees, royal Poinciana trees, and wetlands with egrets, ibis, and roseate spoonbills.

The 26 members of the Highwaymen: Curtis Arnett, Hezekiah Baker, Al Black, Ellis Buckner, George Buckner, Robert Butler, Mary Ann Carroll, Johnny Daniels, Willie Daniels, Rodney Demps, James Gibson, Alfred Hair, Isaac Knight, Robert Lewis, John Maynor, Roy McLendon, Alfonso Moran, Sam, Lemuel and Harold Newton, Willie Reagan, Livingston Roberts, Cornell Smith, Charles Walker, Sylvester Wells and Charles “Chico” Wheeler. Mary Ann Carroll was the only woman in the group. Today paintings by noted Florida Highwaymen sell for anywhere from \$500 to \$45,000 in galleries, antique stores, and art shows.

QUESTIONS

- What supplies would you need to paint/be an artist?
- Why do you think the highwaymen art is popular? What do you like about the paintings?
- Have you ever painted outside?
- Why do you think some art cost a lot of money? (thousands or millions of dollars)
- What is one thing you have seen in Florida that you would want to paint a picture of?

RELATED TOPICS/LESSONS:

Florida flowers, painting, oil paint, art, poinciana, folk art, tourism, poinciana, native species

REFERENCES

FloridaHighwaymen.com

<http://floridahighwaymen.com/>

The National Endowment for the Humanities

<https://www.neh.gov/humanities/2014/septemberoctober/statement/selling-art-the-side-the-road>

The National Museum of African American History and Culture

<https://nmaahc.si.edu/explore/stories/collection/florida-highwaymen>

YOUTUBE

A History of Central Florida podcasts: Highwaymen Paintings. <https://youtu.be/OcET5mQlITQ>

PBS DOCUMENTARIES

The Highwaymen: Florida's Outsider Artists (2003)

The Highwaymen: Legends of the Road (2008)

IMAGES



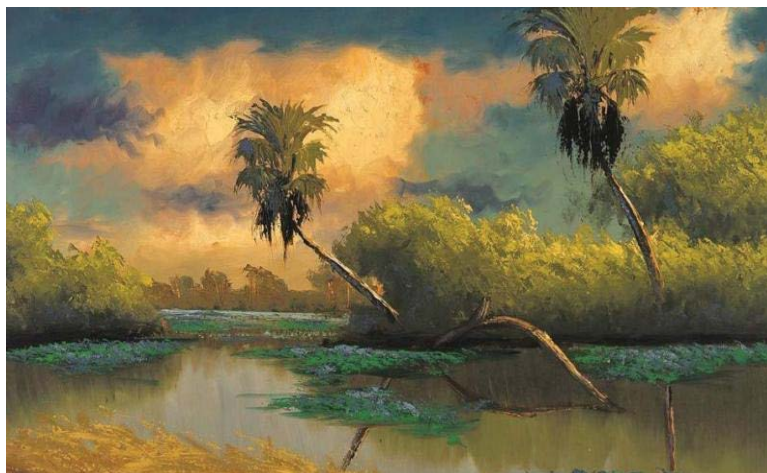
Figure 1: Harold Newton, Poinciana, undated⁸

⁸ Retrieved from Artsy- <https://www.artsy.net/article/artsy-editorial-floridas-black-highwaymen-painters-made-living-jim-crow-south>



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Figure 2: Highwaymen Art Show in West Palm Beach



This Photo by Unknown Author is licensed under CC BY-SA-NC

Figure 3: Florida swampland

LESSON3: COCONUT GROVE

OBJECTIVES

- Describe south Florida and its geographic and neighborhood varieties.
- Learn about the importance Bahamian contributions to south Florida.
- Identify the architecture designs and cultural influences that might be found in coconut grove.

CONNECT TO PREVIOUS LEARNING: Remind students about learning from the previous class What have we seen and heard in the previous classes about neighborhoods in Miami-Dade County?

DISCUSS

Discuss how different immigrant groups have contributed to South Florida's rich cultural heritage. (music, food/crops, architecture, clothing, pastimes/entertainment)

EXPLAIN

Coconut Grove is one of the oldest neighborhoods settled in Miami. Bahamians greatly influenced the settling of the area and have lived there since the 1880's. Bahamians came to South Florida voluntarily seeking a better life for themselves not as enslaved humans forced to work. Many immigrated to the area to work to work at the Peacock Inn on Biscayne Bay. Many of the early Bahamian settlers were skilled stonemasons. Some of their buildings and creations remain in the coquina walls, houses and churches that give Coconut Grove its unique style. Since the agriculture, scrubby pine and limestone topography of South Florida were like that of the islands The Bahamians knew how to plant this land, and they brought in their commonly used trees, vegetables, and fruits. They showed Native American and White planters' methods of growing on land that helped them build the agriculture in the area.

In 1896, when Miami was chartered as a city, more than 40 percent of the black population was Bahamian. Unlike in other parts of the United States, Black and white people in Coconut Grove worked together to establish the first settlement in South Florida. Black and white people even attended church services together during the early years, and there was no mandated segregation. The Bahamian style of architecture remains in Coconut Grove. The area has wood-frame "shotgun shacks" in the West Grove with their front porches and stone chimneys. This type of architectural style that traces back to West Africa. The homes are small, and the rooms are lined up, one behind another, starting with the living room, then one or two bedrooms, and the kitchen at the back.

HISTORIC SITES

Stirrup House- Ebenezer W.F Stirrup, a Bahamian who came to the United States in 1888, built this two-story frame vernacular structure in 1897. Stirrup invested his earnings in land and built over 100 homes to rent or sell to other Bahamian blacks who came to Coconut Grove in the late 1800's and early 1900's. As Coconut Grove's first black millionaire, Stirrup became a leader of the Black community. Many of the houses he built still stand, some occupied by descendants of those early pioneers.

Coconut Grove Cemetery - This cemetery was established in 1913 by the Coconut Grove Colored (Discuss the term) Cemetery Association, which included several prominent, local, black citizens including E.W.F. Stirrup, Walker Burrows and Joseph Riddick. It is the final resting place of many influential pioneer settlers.

The Charlotte Jane Cemetery in Coconut Grove's Bahamian District is a historic site and one of the cemeteries that inspired Michael Jackson's "Thriller" video.

Mariah Brown House, 3298 Charles Ave., built from Florida pine by a Bahamian family in 1897. Mariah Brown, originally from the Bahamian island of Eleuthera, became the village's first documented Black Bahamian resident in 1880.

VOCABULARY

Settlers, immigrants, Shotgun house, Goombay Festival, Junkanoo,

REFLECTION

- In what other ways besides architecture did Bahamians have a strong influence in south Florida?
- Why do you believe Bahamian immigrants designed their houses in coconut grove like their Bahamian homes?
- Do you think it would be harder to move from one country to another? How so?

RELATED TOPICS

The Bahamas, Famous Bahamian-Americans, Peacock Hotel, fishing, architecture (shot gun style homes), limestone/coral building materials

RESOURCES

<https://www.visitflorida.com/en-us/travel-ideas/bahamian-american-culture-in-florida-3-conch-towns-to-see.html>

The early Bahamian history of Coconut Grove by Roshan Nebhrajani, May 9, 2016, The New Tropic. <https://thenewtropic.com/bahamians-coconut-grove/>

Plasencia, Alex, "A History of West Coconut Grove from 1925: Slum Clearance, Concrete Monsters, and the Dichotomy of East and West Coconut Grove," (2011). All Theses. 1117.

Reminiscences of Early Plant Introduction in South Florida- A letter from Walter T. Swingle to David Fairchild December 22, 1893- describes the land. <https://www.ars.usda.gov/southeast-area/miami-fl/subtropical-horticulture-research/docs/reminiscences-of-early-plant-introduction-in-south-florida/>

IMAGES



[This Photo](#) by Unknown Author is licensed under [CC BY](#)

Figure 1: Ebenezer Woodberry Franklin Stirrup House



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

Figure 2: The Peacock Inn 1880s



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Figure 3: Map of Florida and islands of the western Caribbean

LESSON 4: FLORIBBEAN CUISINE

OBJECTIVES

- Describe the food typical to Florida
- Identify fruits, vegetables, meats and seafood produced in Florida
- Gain a better understanding of and respect for how food is related to cultural identity
- Learn about the importance of import and export of food

CONNECT TO PREVIOUS LEARNING

Remind students about learning from the previous class related to the agriculture and food of Florida and how it impacts their daily lives

- What have we seen and heard about food in the previous classes?
- What types of foods are grown/produced in Florida?

EXPLAIN

Floribbean cuisine originated in south Florida by the migration of many groups from countries in the Caribbean Sea. Floribbean is a fusion of Florida and Caribbean along with some varieties such Latin-Floribbean or Hispanic-Floribbean with others such Afro-Floribbean and Indo-Floribbean. The predominant cooking methods are those used by the Cuban, Puerto Rican, and Dominican migrants as well as those of the Asian migrants. The staples of the people are fresh seafood as well as fresh fruits and vegetables, which makes it one of the healthiest types of cuisine. The culture puts a lot of emphasis on the use of locally grown products to cook. Floribbean cuisine has an emphasis on complex melodies of spices, poultry and fish and uses of fruits especially citrus. Some notable foods are the Floribbean seafood, empanadas, barbecue/grilled meats, arroz con pollo, key lime pie, yuca, paella and tropical barbacoa. In south Floridian homes, traditional Southern foods such as coleslaw, black-eyed peas, or crab cakes are often served in the same meal as Floribbean dishes.

DISCUSS

- What are some of the countries on the Caribbean Sea?
- Discuss two Caribbean countries and what type of food people from those countries eat. Do people in Florida eat the same foods or something similar?
- Using pictures of Floribbean fruits and vegetables. What do they see? What patterns, shapes, colors, and sizes do they see?
- How many of the following items have you eaten?
- Fruits: guava, lychee, breadfruit, akee, sapodilla, mamey, tamarind, soursop, starfruit, plantain
- Vegetables: cassava, callaloo, boniato, jicama, tomatillo, yucca, peppers (pimiento, scotch bonnet), gandules, okra, avocado
- Seafood & meat: calamari, conch, shrimp, snapper, flounder, lechon, goat, alligator, oxtail, mackerel
- Dishes: jerk, roti, empanadas, vaca frita, festival, curry, souse, Cuban sandwich, flan



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Figure 2: Typical Cuban cuisine



[This Photo](#) by Unknown Author is licensed under [CC BY-SA-NC](#)

Figure 2: Typical Jamaican breakfast

LESSON 5: THE JONESSES OF PORGY KEY

OBJECTIVES

Describe the Biscayne National Park and its natural environmental features through a virtual tour
Gain a better understanding of and respect for the trailblazing Black Floridians

CONNECT TO PREVIOUS LEARNING

- Remind students about learning from the previous class protecting habitat of Florida and their role in their daily lives
- What have we seen and heard in the previous classes about Florida landscapes?
- What are the regions of Florida? What is geographic region and habitat?
- Virtual tour of Porgy Key and the remains of the Jones family home
- Parson Jones - Biscayne Bay- <https://youtu.be/brshtpvwuuo>
- Features Dr. Caroline Finney- researcher of the Jones family and Brenda Lanzendorff- key Biscayne National Park ranger

EXPLAIN

Florida has about 50 Keys. For nearly a century the Jones family thrived on Porgy Key and other islands at the southern end of what is now Biscayne National Park. Israel Jones was probably born into slavery in 1858. He moved to south Florida around the age of 34 when he was a free man looking for work. For years, he worked on plantations and a pineapple farm. During this time, he learned everything he could about growing lime and pineapple trees. He also met his wife, Mozelle, and started a family. In 1897, when he had saved enough money, Jones purchased Porgy Key for \$300, about \$5 an acre. A year later, he also purchased Old Rhodes Key, and he soon moved his family to its new island home. He grew fruits and vegetables in order to supplement his income. Eventually, the Jones farm became one of the largest producers of pineapples and limes on the East Coast of Florida. By 1929, Israel Jones gave the responsibility of managing his farm to his sons, Arthur and Lancelot. In 1968 the area was declared a National Monument and in 1980 it was declared a National Park.

Lancelot and his sister-in-law Kathleen thought the area of their family home should be preserved, and they decided to sell their share of the island to the National Park Service in 1970. The National Park Service paid them 1.2 million dollars for 277 acres. In 1982, the Jones family home burnt to the ground as a result of a propane tank gas fire. Lancelot moved into former caretaker's shack nearby. During this period, Lancelot spent most of his time alone, reading and relaxing in a home where he used solar panels for electricity and rainwater for washing. Sometimes Lancelot would share his ecological knowledge, particularly about sponges, with all who would listen, including school children who visited the nearby Adams Key Ranger Station's Environmental Education Center.

In 1992, Hurricane Andrew destroyed the shack and park rangers helped Lancelot move off the island. For the second time, his home was destroyed. He lived out his remaining days with the Adderley's who were family friends. Lancelot Garfield Jones died on December 22, 1997, at the age of 99. October 13 is now designated as "Lancelot Jones Day" in Florida. The Jones Family Historic District, including

the former home and farm of Israel Lafayette Jones and his family, is now listed on the National Register of Historic Places. The listing occurred in 2013 and it puts the newly declared district on the official list of the nation's historic places worthy of protection. The Jones Family Historic District is comprised of resources contained within two separate Keys, Porgy Key and Totten Key.

DISCUSS

The Florida Keys is one of the most famous and most visited island groups in the world. The Florida Keys are along the southwest side of Florida and beyond into the Caribbean Sea. There are nearly 50 keys (ancient coral reef islands) that are, for the most part, undeveloped. The creation of Biscayne National Park has helped preserve the keys.

- What would you expect to see on a key?
- What is the national park service?
- What is a key?
- Why are keys important for the ecology of south Florida?

REFLECTION

- Why did people feel that preserving the keys and the Jones family history was important?
- What are some things that are different living on an island versus living on the mainland?
- What do you think it would be like to live alone on an island?

VOCABULARY

bay, key, citrus, sea sponges, historic landmarks, preservation, hurricanes, and mosquitoes

ACTIVITY

Can't visit Biscayne National Park? You can still get a stamp for your national park passport book for your virtual visit! Check out the website, then print this page, cut the stamp out, and paste or tape it into your book. <https://www.nps.gov/bisc/learn/virtual-passport-stamp.htm>

RESOURCES

<https://www.nps.gov/bisc/learn/historyculture/the-joneses-of-porgy-key.htm>

The Parson of Porgy Key. November 8, 1987. The Sun Sentinel. By Stuart McIver <https://www.sun-sentinel.com/news/fl-xpm-1987-11-08-8702040548-story.html>

A Picnic at Porgy Key: The Traveling Trunk. The interactive learning experience is designed to connect teachers and students to the industrious Jones family, who lived and worked the waters and islands of today's park for nearly a century. The Traveling Trunk can be delivered to any school in Dade, Broward or Monroe county. It contains lesson plans, supplies, background histories, and almost everything else that teachers need to bring Biscayne's cultural history to life. For further information or to reserve A Picnic at Porgy Key: The Traveling Trunk, call (305)230-1144 x 08, or visit the park's website at www.nps.gov/bisc/forteachers

IMAGES

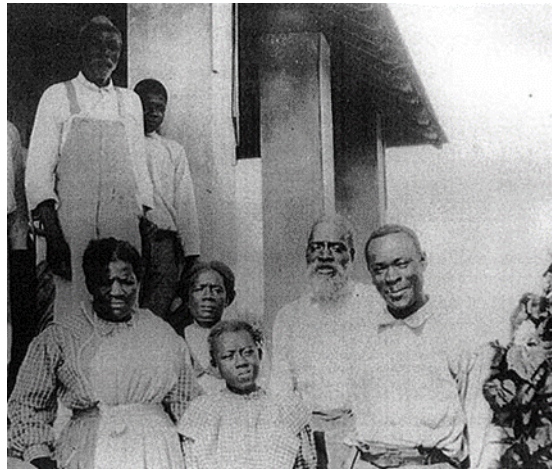


Figure 1: The Jones family on the porch of their Porgy Key home⁹



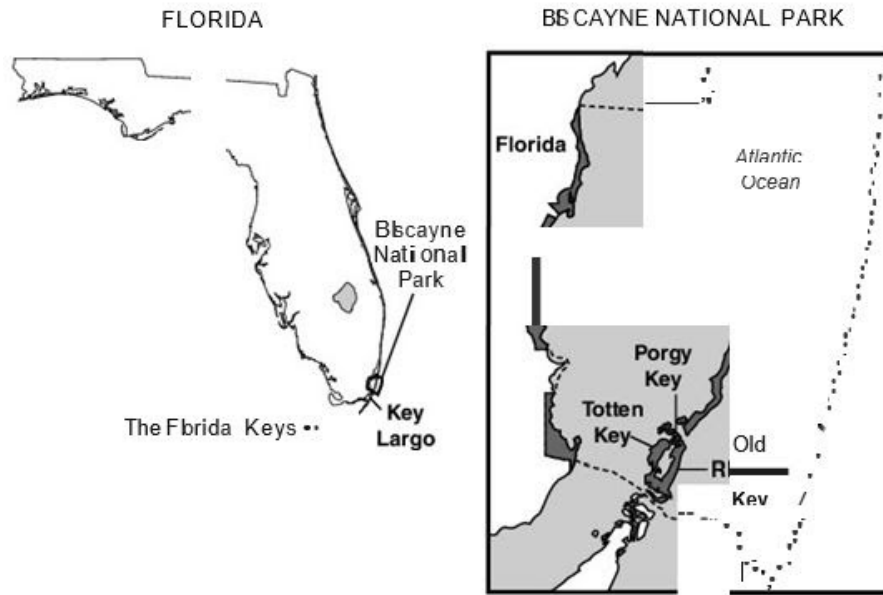
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Figure 2: Israel Jones home prior to 1982

⁹ <https://www.nps.gov/bisc/learn/historyculture/the-joneses-of-porgy-key-page-2.htm>

Figure 3: Map of the Florida Keys and Biscayne National Park

Map indicating the location of Porgy Key, Old Rhodes Key, and Totten Key within Biscayne National Park.



LESSON 6: LITTLE HAITI (LEMON CITY)

OBJECTIVES

- Describe how and why immigration impacts Florida today.
- Identify key characteristics of Miami's Little Haiti community
- Gain a better understanding of Haitian culture
- Discover the different ways immigration from Haiti and the Bahamas have made strong contributions to what is considered today Miami's Little Haiti community

CONNECT TO PREVIOUS LEARNING

- Remind students about learning from the previous class about cultural heritage in Miami Dade county
- What have we seen and heard in the previous classes about the Caribbean? Haiti? Neighborhoods in Miami?

EXPLAIN

Originally known as Lemon City because lemons were grown in the area, the neighborhood lying north of Wynwood is now known as Little Haiti. Lemon City was founded by white Bahamians and existed before The City of Miami was incorporated. Lemon City was not an official city because it had no local government, no land taxes, no police or fire department and other established city services. Lemon City had the first library south of Jacksonville (Lemon City Library, founded in 1894), Dade's first community church (Lemon City Methodist Church, now Grace United Methodist Church, finished in 1893), and Dade's first public school (Lemon City School, started in 1886). Business activity in the community began to decline in the 1930s when the area (annexed) became a part of the City of Miami.

The shift from Lemon City to Little Haiti began to happen in the late 1960's. Commerce and business increased in the area with the influx of Haitian immigrants in the 1970s and 80s. During the time that Jean-Claude "Baby Doc" Duvalier ruled Haiti, many Haitian people left the island and immigrated to the US. The immigration of the Haitian people created a vibrant section of the City of Miami. Haitian Creole is a mixture of French and various West African languages. It's the most widely spoken language in Haiti and by many Haitian immigrants. There was an increased development of Haitian businesses and organizations throughout the community. In the past decade the area has been experiencing great population change. There is still a large Haitian population living in Little Haiti, although they're no longer the majority. Little Haiti has a national and international reputation. Little Haiti is, and will continue to be, of social, cultural, and historical significance to South Florida's Haitian community as well as to members of the Haitian diaspora.

DISCUSS

- Watch Little Haiti (5 minutes) YouTube <https://www.youtube.com/watch?v=bhy56wpxyry>
- Discuss what was seen and heard in the video
- Wall murals/artwork

- Show pictures to demonstrate some of the Haitian businesses and cultural artwork found in the area today. Have the students describe what they see.
- Little Haiti murals <https://www.prx.org/series/32016-little-haiti-mural>

VOCABULARY:

national, international, commerce, annex, diaspora, Creole/Kreyol, influx

REFLECTION

What important role does the Little Haiti community serve for Haitian immigrants?

Does your culture have a special community or place in Miami?

RESOURCES

Haitian Culture Curriculum - Broward Schools

[http://www.broward.k12.fl.us/esol/Eng/Multicultural/PDF/Haitian%20Curr.%20\(K-5\).pdf](http://www.broward.k12.fl.us/esol/Eng/Multicultural/PDF/Haitian%20Curr.%20(K-5).pdf)

Local History Lessons Miami-Dade County <http://socialsciences.dadeschools.net/local%20history.asp>

Names Matter by Erik Bojnansky The Biscayne Times, January 2014

http://biscaynetimes.com/index.php?option=com_content&view=article&id=1671:names-matter&catid=46:features

IMAGES



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Figure 1: Little Haiti Cultural Complete- Caribbean marketplace



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

Figure 2: Lemon City Branch Library, 1955



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Figure 3: Map of the Caribbean

LESSON 7: SLAVE GARDENS (PATCHES)

EXPLAIN

Enslaved people in the United States were given very basic rations by their masters. In some other countries such as Jamaica, slaves cultivated "provision grounds," which was their only source of food. In the US they grew their own foods and staple crops for personal consumption or sale. In small spaces beside their cabins and huts on the plantation, along hillsides, in swamps, and forests enslaved people would often create small gardens. The slave gardens or "patches" were sometimes only a few feet wide but provided important additions to an otherwise nutrient-deprived diet.

For some enslaved people this was a way to carry on their traditional foods. Seeds from African plants found their way to the Americas by way of the slaves themselves, smuggled in their clothing and hair. Some of the plants originally introduced by enslaved people brought to the Colonies include yams, okra, melons, sorghum and cow peas. Some gardens also included Native American herbals and regional wildflowers, often used for medicinal purposes.

Enslaved men and women were only able to tend to their gardens at night, on Sundays or holidays- when they were not required to work for their owner(masters). Enslaved children also had chores to help with the meals such as tending to the garden, fetching water, trapping small animals, fishing and cooking.

Some enslaved people were given larger plots of land, up to an acre to plant cash crops- such as cotton or tobacco that they could sell for money. Slaves in both the Caribbean and in the United States were given the opportunity to garden and sell at markets. In Grenada enslaved people rarely attended church because Sunday was the only day they could garden and barter at the market.

QUESTIONS

- Have you ever grown any food (fruits or vegetables)?
- What do you need to give seed for them to become healthy plants?
- Do you think it would be difficult to garden at night? Why or why not?
- How do fruits and vegetables help your bodies?
- What would you grow if you could make a garden patch?

RELATED TOPICS/LESSONS

gardening, bartering, farmers markets, planting & yield (mathematics), seasons, rations, pork, root vegetables, crops, produce

REFERENCES

Danner, A. (2017). Slave garden at Smithfield cultivates deeper understanding of early colonial times. *The Roanoke Times*. Retrieved from https://www.roanoke.com/nrv/community/slave-garden-at-smithfield-cultivates-deeper-understanding-of-early-colonial/article_ca2438e5-2e82-5caf-933c-22774d6b2674.html

Foodways at Colonial London Town- What did people eat in the 1700's? Center for History Education at the University of Maryland, Baltimore County (UMBC).

<http://che.umbc.edu/londontown/cookbook/what.html>

Interpreting Slave Life Slavery: Let's talk about it

<http://www.interpretingslavelife.com/2010/05/21/pictures-of-the-slave-garden/>

"Slave Gardens" Gale Library of Daily Life: Slavery in America. Retrieved June 25, 2020 from Encyclopedia.com: <https://www.encyclopedia.com/humanities/applied-and-social-sciences-magazines/slave-gardens>

IMAGES



Figure 1: Slave cabin with garden. Retrieved from The Roanoke Times. Photo courtesy of Historic Smithfield Plantation



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

Figure 2: Slave cabin with garden



Figure 3: Basic vegetables that could be grown in a patch¹⁰



Figure 4: Slave rations¹¹

¹⁰ <https://www.restaurantbusinessonline.com/consumer-trends/4-reasons-vegetables-are-hot-right-now>

¹¹ <http://che.umbc.edu/londontown/cookbook/what.html>

The food rations given to enslaved persons included salt pork, herring, and corn meal, as well as beans and greens they grew in their gardens.

ADDITIONAL RESOURCES

<u>TOPIC</u>	<u>DESCRIPTION/DIGITAL RESOURCES</u>
17 Most influential African Americans in Food	https://www.thedaily meal.com/entertain/17-most-influential-african-americans-food-slideshow
African American History in Florida 4-H	http://florida4h.org/about/history/african-american-history-in-florida-4-h/ http://florida4h.org/about/history/Centennial/African%20American%20History/FAMU%204-H%20History%20Gallery/index.htm <p>Extension work with African-Americans began in Florida in 1915 and was headquartered at Florida A&M University (FAMU). As was common in the southern United States at that time, 4-H work was segregated. By 1920, African-American 4-H club work had expanded to 18 counties. The program for men and boys was expanded to include corn clubs, potato clubs, pig clubs, and savings clubs. For the girls there were canning clubs, poultry clubs, improvement clubs, dairy clubs, sanitation clubs, and savings clubs.</p> <p>The 50s saw the beginning of the Miami-Dade County Fair and Exposition, and the hiring of the county's first African American agent, Victoria Simpson.</p>



**African-American
Research Library and
Cultural Center**

Trailblazers of Broward County, Inc. contains oral histories that document the stories and lives of Black pioneers in Broward County. These stories are stored on digital format.

Black Farmers Org

<http://floridablackfarmers.org/>

Civil Eats

<https://civileats.com/category/farming/young-farmers/>

Civil Eats is a daily news source for critical thought about the American food system

Coconut Grove

The area's first black settlers came from the Bahamas to assist in the building of the Peacock Inn, known at the time as the Bay View Inn. Black pioneers from the Caribbean were extremely important to the early city, not only for their carpentry and trade skills. They also were knowledgeable about the local fauna, flora, and food as opposed to the pioneers from the North, who had never seen saposilla and the like.

**Early Farming by Miami
Shores Settlers**

<http://boundbybeauty.org/2017/08/11/early-farming-by-miami-shores-settlers/>

Foods here in the 1800s - pokeweed, sorrel, dock and other greens; Huckleberries, wild Muscadine grapes and elderberries; oranges, lemons, limes, tamarinds, figs, bananas, pineapples, mangoes, sappadillas, alligator pears, Jamaica apples, Japanese plums, sugar apples, guavas, papaws, and dates

Fisher Island

Fisher Island was originally first owned by a black man – real estate developer Dana A. Dorsey. He was South Florida’s first African-American millionaire and later sold the island in 1919 to Carl Fisher who was developing Miami Beach.

Floribbean cuisine

Floribbean cuisine is found in varying forms in Florida restaurants and in the homes of many Floridians throughout the state. The essence of what makes a particular dish "Floribbean" is similar to that of certain other aspects of variable Floridian culture: it is influenced by visitors and immigrants from all over the world, but especially from the Caribbean (with notable influence from Haiti, the Bahamas, Barbados, Guyana, Jamaica, Trinidad and Tobago), Cuba and Puerto Rico

Florida Black Heritage Trail

<https://dos.myflorida.com/historical/preservation/heritage-trails/black-heritage-trail/>

Florida Folklife Program

<https://dos.myflorida.com/historical/preservation/florida-folklife-program/>

Apprenticeship Participants

Haitian Storytelling, Cooking & Folk Remedies 2019

Master: Liliane Louis, Miami

Apprentice: Marie Ketsia Theodore-Pharel, Homestead

Haitian storytelling, foodways, & folk medicine 2016

Master: Liliane Nérette Louis, Miami

Apprentices: Joanne Hyppolite, Miramar

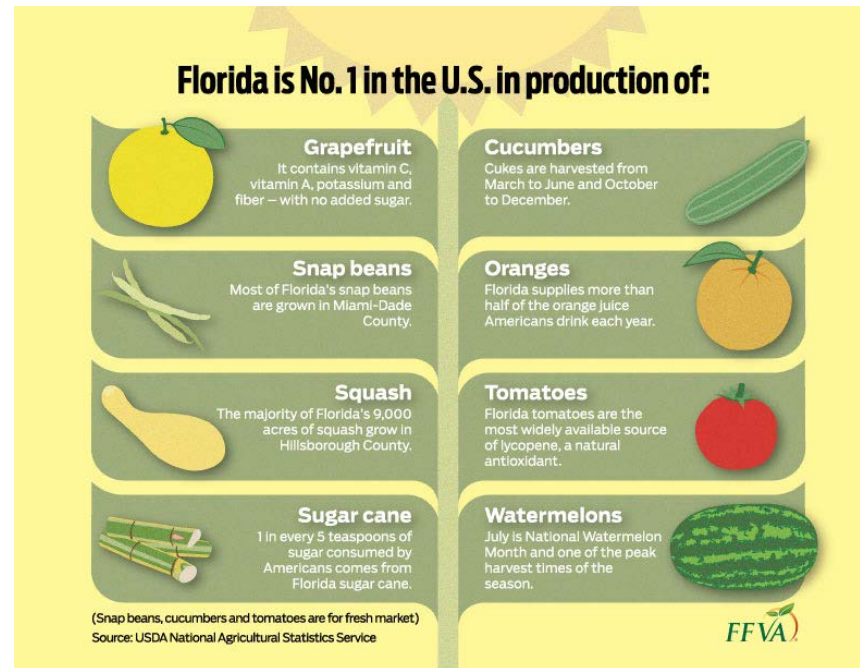
Fabienne Josaphat, North Miami Beach

Marie Ketsia Theodore Pharel, Homestead

Florida Fruit & Vegetable
Association

https://www.ffva.com/FFVA/AboutFFVA/Ag_Numbers.aspx

https://www.ffva.com/FFVA/By_the_numbers.aspx



Florida Highway Men

Artists

Guide to African-
American Heritage
Landmarks and Historic
Sites in Florida

<https://www.visitflorida.com/en-us/travel-ideas/guide-to-african-american-heritage-landmarks-and-historic-sites-in-florida.html#miami>

Haitian Cuisine	<p>https://www.eater.com/a/mofad-city-guides/miami-haitian-food</p> <p>The food draws influences from French and West African traditions and Caribbean ingredients. These six dishes — from stews to fried meats — serve as a good introduction to the culinary offerings of the Haitian community in Miami. Pate, Fritay, Diri ak djon djon, Soup joumou, Vegetable stews, Lambi</p>
Little Haiti/ Lemon City	<p>http://theharlemtimes.com/online-news/little-haiti-a-taste-of-culture-food-and-art</p> <p>https://www.miamiandbeaches.com/neighborhoods/little-haiti</p> <p>https://littlehaiticulturalcenter.com/</p>
Native American Heritage Trail	<p>https://dos.myflorida.com/historical/preservation/heritage-trails/native-american-heritage-trail/</p>
Pirate Black Caesar	<p>Black Miami – The History You Never Learned</p> <p>https://www.theworldorbust.com/black-miami-the-history-you-never-learned/</p> <p>there is an island, Caesar’s Rock, in Biscayne Bay named after Black Caesar where he actually maintained his base of operations</p>
Reflections on slave gardens	<p>Reflections on slave gardens</p> <p>https://www.ft.com/content/faf3d1ea-ba55-11e8-8274-55b72926558f</p> <p>Julia Carney and Richard Rosomoff published In the Shadow of Slavery, an excellent survey of plants that travelled west across the Atlantic with the slave trade.</p>
Saltwater railroad	<p>https://daily.jstor.org/the-saltwater-road/</p>
United States African Americans	<p>http://www.foodbycountry.com/Spain-to-Zimbabwe-Cumulative-Index/United-States-African-Americans.html</p>

In the 1600s, African slaves were brought to the United States, along with their food and styles of cooking. They brought okra, sesame seeds, peanuts, black-eyed peas, and rice.

Sweet potatoes and yams have been a large part of African Americans' diet since African slaves brought them to the United States in the 1600s. Eating cornbread and grits (dried and boiled grains from corn) are also traditions, as well as sweetening dishes and drinks with molasses. Other traditional African American foods and dishes include barbecued meat, sweet cornbread, fried chicken, and of course, desserts. A delicacy that has been a specialty of African Americans especially in the South is chitterlings.

USDA

United States Department of Agriculture National Agricultural Statistics Service
https://www.nass.usda.gov/Statistics_by_Subject/Demographics/index.php
[https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/Race, Ethnicity and Gender Profiles/Florida/cpd12086.pdf](https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/Race_Ethnicity_and_Gender_Profiles/Florida/cpd12086.pdf)

Black Farmers in America, 1865-2000 The Pursuit of Independent Farming and the Role of Cooperatives

<https://www.rd.usda.gov/sites/default/files/RR194.pdf>

“The civil rights movement had a direct influence on cooperative formation by introducing the critical element of leadership.”

Virginia Key Beach

Local officials designated Virginia Key Beach as the exclusive public park for Black people on August 1, 1945. The beach became a popular social gathering spot, but was eventually closed in 1982. The beach was eventually re-opened to the public in 2008 and has regained in popularity as a great outdoor venue for major events and festivals.

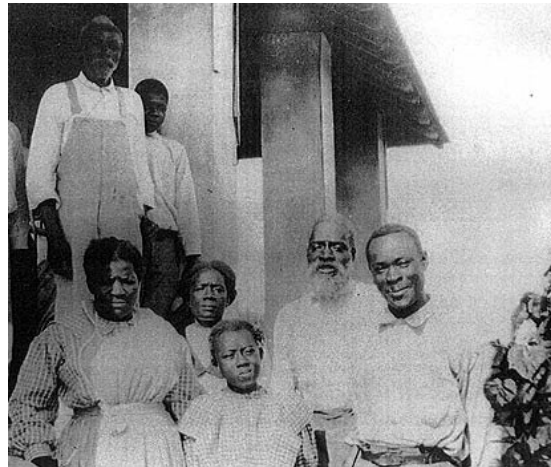
The Joneses of Porgy Key

<https://www.nps.gov/bisc/learn/historyculture/the-joneses-of-porgy-key.htm>

For nearly a century the Jones family thrived on Porgy Key and other islands at the southern end of the park. That an initial \$300 investment in land could turn into a

total resale of nearly \$1.5 million. He began farming pineapples and key limes and within two years of planting, the Jones family began to see profit. In addition, he produced fruits and vegetables in order to supplement his income. Eventually, the Jones farm became one of the largest producers of pineapples and limes on the East Coast of Florida.

In 1968 the area was declared a National Monument and in 1980 it was declared a National Park. Motivated by the belief that the area should be preserved prompted Lancelot and his sister-in-law Kathleen to sell their share of the island to the National Park Service in 1970. Made up of more than 277 acres, the National Park Service paid them 1.2 million dollars. In 1982, the Jones family home burnt to the ground as a result of a propane tank gas fire. Lancelot moved into former caretaker's shack nearby. In 1992, Hurricane Andrew destroyed the shack and Lancelot moved off the island, assisted by park rangers. For the second time, his home was destroyed. He lived out his remaining days with the Adderlys who were family friends. Lancelot Garfield Jones died on December 22, 1997, at the age of 99.



Fishing

African American man proudly displaying his catfish catch - Broward County, Florida

1959

<https://www.floridamemory.com/items/show/76757>



African American man with his catch of fish in Apalachicola, Florida. 1899



People fishing at Ingram Park - Opa-locka, Florida. 1974



- Book** Before the Pioneers: Indians, Settlers, Slaves, and the Founding of Miami (Florida in Focus) Paperback (2017) by Andrew K. Frank
- Book** Anna Madgigine Jai Kingsley: African Princess, Florida Slave, Plantation Slaveowner (2018) by Daniel L. Schafer
- Black history in the Keys** <http://www.keyshistory.org/blackhistory.html>
- Book** Forgotten Doors: The Other Ports of Entry to the United States

INDIGENOUS/NATIVE FLORIDIAN HISTORY, FOOD, AND FARMING

Bina Sengar

LECTURE 1: GEOGRAPHY OF FLORIDA AND SOUTH FLORIDA (PART I)

TITLE

Visit to Aunt Sheila's farm

OBJECTIVES

- Describe the Florida and its natural environmental regions through a virtual tour
- Identify regions of Florida and their unique geographies
- Gain a better understanding of and respect for the natural of Florida
- Learn about the importance of various animal and natural specialties of Florida
- Identify the vibrant colors, designs, and patterns of plants and animals found in Florida

CONNECT TO PREVIOUS LEARNING

Remind students about learning from the previous class protecting habitat for animals and preserving the ozone layer.

- What have we seen and heard in the previous classes?
- What is the ozone layer? What function does it serve?

Virtual tour of Florida and its different geographic regions: Ask students to use their sense of observation, such as sight and hearing, to report on what they see and what they hear when they see the Coastal, Swamp, Lakes and flatland regions of Florida. Discuss the visible sights and scenes. Discuss the invisible plants and animals of the regions.

DISCUSS

Discuss two pieces of regions of Florida example a farm with a ranch and a vegetable and with domesticated animals and engage students in a conversation to explore the farmhouse and its activities:

- What do they see? What patterns, shapes, colors, and sizes do they see?
- What does that make you feel?
- Do you hear any sounds?

EXPLAIN

Florida is the Subtropical region of USA and its habitat and vegetation is unique in many ways, compare to that of many parts of USA. It is the coastal plains, backwaters and bay areas with islands that make Florida and its ecology unique in many ways. The forests of Florida are unique blend of swamps and lakes. The often-continuous rainfall and large influx of sea water in through islands and estuaries further diversifies the biodiversity of state. characterized by continuous rainfall. More than half of the world's plants and animal species are indigenous to the rainforest. Lots of natural medicines are discovered in rainforests. The unique, lakes, sea, swamp, river and

plain ecosystems of state host diverse kind of animals, plants, insects, and non-living things, for example, water, soil, sand etc. Examples of ecosystem are oceans, and forests. In this lesson students will be specifically taught about the plain and farmland attributes of Florida and South Florida.

NEW CONCEPTS

- Biodiversity
- Ecology
- Habitat
- Geographic regions: plains, forests in the plains, farming culture and their natural and farm products.

VOCABULARY:

Ecosystem, habitat, species, biodiversity, farming

REFLECTION

- What do you see when you see the plains of Florida?
- What do you hear when you go on a virtual tour of the farmland, ranches and forests of Florida plains?
- What living and non-living things are visible in the virtual tour?

TRUTH AND DARE

- Truth: We live in city with close connections with rural life, farm-ranches, vegetation farms and forests. Our food comes from these areas of plains
- Dare: This week; have one of the students suggest a dare.

REFLECTION ON LAST WEEK'S LESSON

- Do you remember the dare?
- Did you tried to raise a plant in a pot?

RESOURCES

<https://www.ducksters.com/geography/state.php?state=florida>

https://kids.kiddle.co/geography_of_florida

<https://kids.kiddle.co/florida>

<https://study.com/academy/lesson/florida-facts-lesson-for-kids.html>

<https://www.coolkidfacts.com/florida-facts/>

<https://www.stateofflorida.com/education-for-kids/>

LECTURE 2: GEOGRAPHY OF FLORIDA AND SOUTH FLORIDA (PART II)

TITLE

Visit to the Everglades

OBJECTIVES

- Describe the Florida and its natural environmental swamp regions through a virtual tour
- Identify regions swamps in south Florida and their special geographic attributes
- Gain a better understanding of and respect for the natural swamps of Florida
- Learn about the importance of various animal and natural specialties of swamps of everglades
- Identify the vibrant colors, designs, and patterns of plants and animals found in everglades

CONNECT TO PREVIOUS LEARNING: Remind students about learning from the previous class protecting habitat of Florida and their role in their daily lives

- What have we seen and heard in the previous classes?
- What are the regions of Florida? What is geographic region and habitat?

Virtual tour of Everglades and its different salient features pertaining to land, water and living beings : Ask students to use their sense of observation, such as sight and hearing, to report on what they see and what they hear when they see swamps of Everglades of Florida. Discuss the visible sights and scenes. Discuss the invisible plants and animals of the regions.

DISCUSS

Discuss two pieces of regions of Florida Everglades example swamp habitat and its biota with tree islands and vegetation and with its animals and engage students in a conversation to explore the how people lived and live in swamps:

- What do they see? What patterns, shapes, colors, and sizes do they see?
- What does that make you feel?
- Do you hear any sounds?

EXPLAIN

The most unique features of Florida is its swamps, and Everglades remains one of the largest habituated swamp of the world. The biodiversity of Everglades is unique in United States, and people in past only used to live in these swamps of Florida. Explain to students that how life and living was possible in Swamps and which all communities used to live here. Gradually students should be introduced about Humans and Swamps connections in history with Swamps. In this lesson, students to be told

ABOUT

- What is a swamp.
- Why swamp is necessary for the ecology of South Florida

- How people and swamp can live happily together and explore possibilities of new life ways in swamp
- Swamp and contemporary life to be introduced

INTRODUCING STUDENTS TO NEW CONCEPTS

- Swamp
- Tree islands
- Life in swamp
- Swamp tourism
- Everglades

VOCABULARY:

Swamps, Tree Islands, Airboats, Swamp-life

REFLECTION

- What do you see when you see the Everglades?
- What do you hear when you go on a virtual tour of the Swamps and forests of Everglades of Florida?
- What living and non-living things are visible in the virtual tour?

TRUTH AND DARE

- Truth: We live in city which is made after filling all the major swamps of South Florida
- Dare: This week; have one of the students suggest a dare.

REFLECTION ON LAST WEEK'S LESSON

- Do you remember the dare?
- Did you tried to visit the swamps of everglades or talked about it with your parents?

RESOURCES

<https://kids.nationalgeographic.com/explore/nature/everglades/>

<https://www.nps.gov/ever/learn/kidsyouth/index.htm>

<https://www.campliveoakfl.com/7-interesting-facts-florida-everglades-kids/>

<https://study.com/academy/lesson/facts-about-the-everglades-lesson-for-kids.html>

<https://alongforthetrip.com/visiting-the-everglades-with-kids/>

<https://kids.kiddle.co/everglades>

LECTURE 3: AFRICAN AMERICAN HERITAGE IN FLORIDA

TITLE

Black Farmers of South Florida: Visit to farmers market with Aunt Sheila

OBJECTIVES

- Describe the farming traditions in Florida and about the black farmers heritage through a virtual tour
- Identify regions where black farmers have their farms in south Florida and their special geographic attributes
- Gain a better understanding of and respect for the black farmers of Florida
- Learn about the importance of various products through farming are produced by the farmers of African American heritage
- Identify the vibrant colors, designs, and patterns of plants and animals found in everglades

CONNECT TO PREVIOUS LEARNING

Remind students about learning from the previous class protecting habitat of Florida and their role in their daily lives

- What have we seen and heard in the previous classes?
- What are the farming produce of Florida? What are major farming areas and communities of Florida?

Take students on a tour of Farmland owned by a Black Farmer and introduce them to salient features pertaining to the farm and farmer: Ask students to use their sense of observation, to identify different plants and trees. To report on what they see and what they hear when they move around in a farm and what all domesticated animals they come across in the region.

DISCUSS

Discuss two pieces of regions of Black farmers example how the black farmers is working in a farm and where he sells his products its biota with tree islands and vegetation and with its animals and engage students in a conversation to explore the how people lived and live in swamps:

- What do they see? What patterns, shapes, colors, and sizes of the plants they see?
- What does that make you feel?
- What different sounds animals of the farm made?

EXPLAIN

One of the most unique features of Florida is its flatlands which make it conducive for large scale ranch, farming and plantation. Therefore, to promote this farming attributes Black farmers did a lot to improve cultivation practices in Florida. From 16th century onwards African American people were also one of the largest cultivating communities of Florida and till 1900 they dominated in the plantation and farming practices. They were also the largest farmland owners after the native American communities. They also introduced several efficient farming techniques

and crops to the farms in Florida. However, after the introduction of railways and migration of population from northern states a lot of their land was lost or bought from settlers this is known as 'black land loss'. Now Black farmers are reclaiming their farming heritage and developing farms of their own. In 2011 Black Farmers Agriculture Association (BFAA) was founded and it is helping a lot of Black farmers about new age farming techniques.

- Name famous black farmers who improved technology in farming.
- What are crops of plantation?
- What was 'black land loss'?
- What is the BFAA?
- What you learnt in the farm?

NEW CONCEPTS

- Black farmers
- Black land loss
- Black farmers association
- Black farmers market

VOCABULARY:

Black-Farmers, Land Loss, Farmers Market, Farm Techniques, Crops, Plantation

REFLECTION

- What do you see when you see the Black Farmers?
- What do you hear when you go on a tour of the Farm of a Black Farmer in Florida?
- What living and non-living things are visible in the tour?

TRUTH AND DARE

- Truth: We live in city where we don't see Black farmers engaged in farming in Florida
- Dare: This week; have one of the students suggest a dare.

REFLECTION ON LAST WEEK'S LESSON

- Do you remember the dare?
- Did you tried to visit the farm owned by a black farmer and discussed it with your peers and parents?

RESOURCES

<https://www.npr.org/2005/02/22/5228987/black-farmers-in-america>

<https://www.nps.gov/ever/learn/kidsyouth/index.htm>

<https://www.theguardian.com/environment/2019/apr/29/why-have-americas-black-farmers-disappeared>

<https://www.nationalblackfarmersassociation.org/>

<https://indianapublicmedia.org/earthcasts/an-educational-farm-where-black-history,-and-black-kids,-are-front-and-center.php>

<https://www.farmproject.org/blog/2017/2/4/hikqys8igvobo368aco3mrburv7d1>

<http://floridablackfarmers.org/>

LECTURE 4: NATIVE AMERICAN AND BLACK HERITAGE IN FARMING

TITLE

Who developed farming in Florida?

OBJECTIVES

- Describe the emergence of different farming techniques of Florida
- Discuss the swamp and farmland agricultural practices of Florida
- Identifying early farming regions and communities in Florida engaged in swamp and plain area farming practices
- Identify various vegetation and cropping patterns in south Florida swamps
- Identify and know heritage of plain land farming in south Florida

CONNECT TO PREVIOUS LEARNING

Remind students about learning from the previous class protecting habitat of Florida and their role in their daily lives

- What have we seen and heard in the previous classes?
- What are the farming regions of Florida? What is geographic region of swamp and plain land?

Virtual tour of swamp-based tree island farm and a garden-fresh farm of South Florida: Show students farm of swamp and an agrarian farm in plain lands of Florida.

<https://www.youtube.com/watch?v=OTZwleW2-EM>

<https://www.youtube.com/watch?v=aYjenCQOc5U>

DISCUSS

Discuss with students about the tropical climate vegetation and how different methods of farming evolved in Florida in swamps and plains, the early farmers were native Americans and African American communities who all migrated from Caribbean islands as first settlers to Florida. The settler communities shared their skills of agriculture and crafts used for farming with the native Americans. Thereafter, many new crops and farming techniques were developed in South Florida.

- What were the first produced crops of Florida?
- Which communities were growing and tilling corn, maize and tuber vegetables in south Florida?
- Who were the first settler farmers of Florida?
- What were the crops grown by first settler communities in Florida?

EXPLAIN

Since the earliest times of human evolutions, the early communities of Florida and most importantly of South Florida were Indians/native Americans known as Calusa, Tequesta, Key, Ais and Jaega communities. All these communities depended on hunting and fishing in the swamps and coasts of South Florida. They also gathered the edible tubers and fruits from the lands and forests of South Florida. In 15th and 16th century when Spaniards and French came in Florida, they brought with them several kinds of animals; pigs, swines, calves, goats, horses, mares and some 500 farming families and craftsmen to begin farming in the region. Eventually these settlers farming communities who were mainly of African origin got settled in different parts of Florida and developed working alliances with the Native Americans. The new cultural exchange brought different farming and garden developing skills among people of Florida. Also, plantation and commercial farming grew in the region by this time and large farms were used for plantation of different kind of fruits and vegetables. Settler communities of African origin brought with them several new crops like sugarcane, wheat, oats, beans and livestock (as mentioned above).

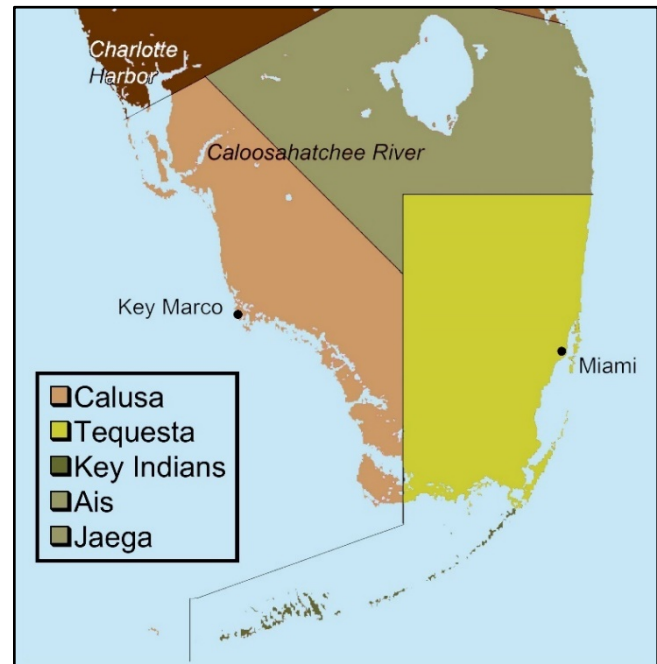


Figure 1: Native Americans in South Florida

- What were the early farmers were using for food?
- Which new crops were introduced by the settler farmers?
- What were the tubers used for food by the early agriculturists?
- Swamp and contemporary life to be introduced

NEW CONCEPTS

- Swamp agriculture
- Tubers
- Plantation
- Early Indians
- Settlers

VOCABULARY:

- Enslaved communities
- Settler farmers
- Livestock

- Commercial farming
- Farming techniques
- Early farming systems

REFLECTION

- What all different kind of farming systems in South Florida?
- What different crops were introduced by the African American settlers in Florida?
- What were different kind of livestock were introduced in Florida by early African American settlers?

TRUTH AND DARE

1. Truth: The first commercial farming techniques were introduced in Florida by the people of black heritage
2. Dare: This week; have one of the students suggest a dare.

REFLECTION ON LAST WEEK'S LESSON

- Do you remember the dare? Did you tried to visit museum of history Miami to know agricultural history of south Florida?

RESOURCES

- <https://ufdc.ufl.edu/uf00002256/00001/17j>
- <https://majikphil.blogspot.com/2016/07/floridas-important-native-plants-16-29.html>
- <http://www.keyshistory.org/farming.html>
- <https://www.visitflorida.com/en-us/listing.aot40000007qttvaaa.html>
- <https://golatinos.net/visit-the-historic-redland-tropical-trail-miami-s-countryside/>

LECTURE 5: NATIVE AMERICAN HERITAGE TRAIL

TITLE

Visit to Miami Circle

OBJECTIVES

- Describe the Florida and its early history about the native American communities
- Identify regions of swamps and coastal south Florida where two prominent communities Calusa and Tequesta Indian used to dominate in the pre-Columbian era.
- Gain a better understanding about native American heritage trails of Florida
- Learn about the importance of various native American communities and their ecological and monumental heritage in south Florida
- Identify the major monuments associated to Calusa and Tequesta communities.

CONNECT TO PREVIOUS LEARNING

Remind students about learning from the previous class protecting habitat of Florida and their role in their daily lives

- What have we seen and heard in the previous classes?
- Which are the different native and settler communities of Florida? What is geographic region and settlement areas of these communities?

Virtual tour of archeological sites associated to Calusa and Tequesta Indians: Students to be introduced of the Miami Circle and must visit 'Miami Circle' archeological site associated to the Tequesta Indians.

<https://www.youtube.com/watch?v=STewagY3CqE>

<https://www.youtube.com/watch?v=KnfBYFcl-Xo&feature=youtu.be>

DISCUSS

Discuss with students about life, culture and history through archeological sources of Calusa and Tequesta communities:

- Who were Calusa? Where they lived?
- What was major contribution of Calusa Indians to south Florida?
- Who were Tequesta? Where they lived?
- What was major contribution of Tequesta Indians to south Florida?

EXPLAIN

The earliest people of South Florida were Calusa and Tequesta Indians. They were the original inhabitants of the swampy and coastal climatic terrain of South Florida. These two communities and their allied communities knew well the survival strategies in the difficult systems of Swamps of Florida. Therefore, the early African American enslaved communities learnt a lot from them. The Calusa and Tequesta were efficient hunters and gatherers of Everglades swamps and also knew good

techniques to build huts, canoe, and different tools for hunting. They sold and did barter with the hides and different parts of swamp animals in the Gulf of Mexico with the French, Spaniards and Free explorer African people in the 16th and 17th century. Most of the modern names of South Florida cities are actually given by these two communities. All the settler communities from Native America and also from other parts of the world learnt to live in Florida because of the knowledge passed on by these two early communities.

- What are difficulties to live in a swamp?
- Why everglades swamp is necessary for the ecology of south Florida?
- What were special traits of living in the everglades swamp of Calusa and Tequesta Indians?
- What are salient features of Miami circle?

NEW CONCEPTS

- Native American
- Florida Indians
- Calusa
- Tequesta
- Miami circle

VOCABULARY

- hunting, gathering, barter, canoe, inhabitants, settler

REFLECTION

- What kind of houses could be made in the swamps of Everglades?
- How people in Swamps must be living with doing agriculture?
- What we know about Calusa and Tequesta India?

TRUTH AND DARE

- Truth: The Calusa and Tequesta were the first inhabitants of the Miami City of present. Miami Circle was there major sacred site and cultural centre.
- Dare: This week; have one of the students suggest a dare.

REFLECTION ON LAST WEEK'S LESSON

- Do you remember the dare?
- Did you tried to visit the Miami Circle with your parents?

RESOURCES

<https://krooney64.wixsite.com/flnativeamericans/tequesta>

<https://www.floridamuseum.ufl.edu/wp-content/uploads/sites/16/2017/03/inquiry-boxes-fl-native-people-teachers-guide-full.pdf>

<https://www.polk-fl.net/staff/teachers/tah/documents/floridaflavor/lessons/a-11.pdf>

<https://fcit.usf.edu/florida/websites/links001.htm>

<http://www.pbhistoryonline.org/middle-school-lessons/004-tequesta/004-tequesta1.htm>

LECTURE 6: NATIVE AMERICAN HERITAGE- THE SEMINOLE

TITLE

Visit to Reservation-Big Cypress

OBJECTIVES

- Describe the native American heritage of Florida after Calusa and Tequesta
- Discuss who were the Seminole and why they are called 'Seminole'
- Gain a better understanding about the south eastern native American communities and their heritage
- Discuss about the different cultural trails leading to southern migrations of south eastern tribes to Florida
- Identify the different reservations for Seminole communities in Florida

CONNECT TO PREVIOUS LEARNING:

Remind students about learning from the previous class about the Native American heritage and Indian legacy in Florida.

- What have we seen and heard in the previous classes?
- Which all are the Native American communities of Florida and where they live?

Virtual tour or actual tour of Big Cypress Seminole Indian Reservation and visit to their Ah-Tah-Thi-Ki Museum : Ask students to use their sense of observation, such as sight and hearing, to report on what they see and what they hear when they see Big Cypress Seminole Indian Reservation. What all places they saw in the reservation. How was their experience about the visit to the museum of Ah-Tah-Thi-Ki

DISCUSS

Discuss with students history and heritage of Seminole Indians, as how they came to Florida as group of different Indian bands and mixed themselves with the different Indian communities of Florida. How they protested invading British and French forces.

- How the people of Seminole community live in reservation?
- What are dress and clothes styles of Seminole Indians traditionally
- What are games the Seminole Indians play, as shown in the museum
- What is a chikee hut?

EXPLAIN

Presently Seminole Indians are the largest Native American community living in Florida. Seminole Indians came to be known as 'Seminole' by late 19th century. They were part of the larger South Eastern Native American group of Mississippian and Muscogee Creek Indians. Later with the help of original inhabitants of Florida like Appalachia, Calusa and Tequesta and also with settler African American people of North Florida and South East Florida they readily became well equipped to live in the Swamps of Florida. From the early decades of 18th century several groups of native American communities of

South East region continued to migrate in Florida to evade conflicts with the British and French. Prior to the 18th century there were cultural and trade connections among native American communities and nation of Muscogee Creek, Yamasee, Mikasuki living in the South East (Present Georgia and Alabama) with those of Apalachee, Timucua, Calusa and Tequesta the indigenous communities of Florida. Eighteenth century conflicting episodes of settler colonialists from Europe driven the native American communities of South East to develop stronger martial and cultural connections with the indigenous people of Florida. Seminole also had three major wars with Britishers to remain free in Florida. Thus, these intercultural alliances within the native American communities of Florida evolved among two main native American communities who well known in Florida now as Seminole and Miccosukee. In the chapter students will be introduced about the ‘Seminole’ Indians.

- Why Seminole community is called as ‘Seminole’?
- How Seminole people came to Florida?
- Where Seminole lived in Florida?

NEW CONCEPTS

- Seminole
- Indian reservation
- Seminole wars
- Southeast Indians
- Muscogee Creek

VOCABULARY:

Indigenous, Mississippian culture, Intercultural, alliance,

REFLECTION

- What do you see when you see the Seminole reservation?
- What were the major sites in a Seminole reservation?
- How was the swamp life in Big Cypress Indian reservation?

TRUTH AND DARE

- Truth: Seminole people live in reservation and also in the cities of Florida.
- Dare: This week; have one of the students suggest a dare.

REFLECTION ON LAST WEEK’S LESSON

- Do you remember the dare? Did you tried to visit the swamps of Big Cypress Indian reservation.

RESOURCES

<https://www.youtube.com/watch?v=WvuV2EuhtFc>

https://www.youtube.com/watch?v=8_LV7jQSouo

https://www.ducksters.com/history/native_americans/seminole_tribe.php

http://www.bigorin.org/seminole_kids.htm

<https://study.com/academy/lesson/seminole-facts-lesson-for-kids.html>

LECTURE 7: NATIVE AMERICAN HERITAGE: MICCOSUKEE

TITLE

Miccosukee Culture of South Florida

OBJECTIVES

- Describe the culture of people of Miccosukee Indians of everglades
- Identify regions in the everglades as the reservations of Miccosukee Indians
- Gain a better understanding of and respect for the natural home of the Miccosukee Indians
- Learn about the importance of difference between Seminole and Miccosukee cultures
- Identify the vibrant colors, designs, and patterns of life and culture of Miccosukee Indians

CONNECT TO PREVIOUS LEARNING: Remind students about learning from the previous class about Indians who were forced to migrate from their areas of South eastern States of Mikasuki and came to live in Florida.

- What have we seen and heard in the previous classes?
- What are the regions of Muscogee creek and Mississippian cultures? What is geographic region and habitat of Seminole and Miccosukee communities?

Virtual tour of Everglades Miccosukee Indian village

<https://www.youtube.com/watch?v=IK4YnwhsEjM>

<https://www.youtube.com/watch?v=arubo8oW4jo>

Ask students to use their sense of observation, such as sight and hearing, to report on what they see and what they hear when they see details of the Miccosukee Indian village and Miccosukee camps. Discuss the visible sights and scenes. Discuss the cultural manifestation of Miccosukee people with their houses, camps, clothes and food.

DISCUSS

Discuss life and culture of Miccosukee and why the swamp animals like alligators are so important for the Miccosukee people. Discuss the hammock and camps houses of Miccosukee communities as they live in the tree islands and make their camps in the different parts of Miccosukee reservations of Florida.

- What do they see in a tree island? What patterns, shapes, colors, and sizes do they see?
- What does that make you feel, when you learn about Miccosukee Indians?
- What special you see in the Miccosukee Indian village?

EXPLAIN

The Native American Indians of Florida and at present live under two major communities Seminole and Miccosukee. They both belong to South Eastern Indians group of Native American communities. Miccosukee and Seminole are different mainly because of their languages. Miccosukee also known as

Mikasuki. As both the communities speak two different languages. Miccosukee are living mainly in the Southern parts of Florida in the Everglades reservations of US-41 and Alligator Alley. Miccosukee continue to remain more traditional and follow many of their cultural roots of earlier times.

Miccosukee Indian village of US-41 is one of the true cultural symbol of Miccosukee life and society.

- Where is the Miccosukee Indian Village?
- Why swamp life is necessary to understand life of Miccosukee people?
- How Miccosukee people and swamp live happily together and explore possibilities of new life ways in swamp

INTRODUCING STUDENTS TO NEW CONCEPTS

- Miccosukee
- Tree islands
- Life in a Miccosukee camp
- Miccosukee tourism
- Miccosukee of everglades

VOCABULARY

- Swamps, tree islands, airboats, swamp-life, Mikasuki

REFLECTION

- What do you see when you see the Miccosukee camp in Everglades?
- What do you hear when you go on a virtual tour of the Miccosukee camps in the forests of Everglades of Florida?
- What living and non-living things are visible in the Miccosukee camp?

TRUTH AND DARE

- Truth: Miccosukee live in camps besides the US-41 which is part of Miccosukee Indian Reservation
- Dare: This week; have one of the students suggest a dare.

REFLECTION ON LAST WEEK'S LESSON

- Do you remember the dare?
- Did you tried to visit the Miccosukee Indian Village or talked about it with your parents?

RESOURCES

<http://stories.americanexperience.org/a-place-to-remember>

<https://www.news-press.com/story/news/2017/10/10/people-everglades-survive-thrive-wake-hurricane-irma/728221001/>

<https://tribe.miccosukee.com/>

<https://www.lovetheeverglades.org/blog/category/miccosukee>

http://www.bigorin.org/miccosukee_kids.htm

MUSLIM CONTRIBUTIONS TO THE NATURAL SCIENCES

Raquel Sedano

Goal: Enrich the learning experience using a multi-cultural approach in the study of science and technology through the many contributions of Muslim scholars during the period known as the Islamic Golden Age

LESSON 1 I: HASAN IBIN AL-HAYTHAM (PHYSICIAN AND FATHER OF MODERN OPTICS)

WHEN

Born 965 CE

WHERE

Basra, present day Iraq

CONTRIBUTIONS

Optics (visual perception and ophthalmology), Mathematics, Physics, Medicine, Astronomy, Anatomy

BOOKS

200 plus books of which 50 have survived

- Kitab al Manazer (Book of Optics)
- Risala fi I-Daw (Treatise on Light)

VIDEO

https://www.youtube.com/watch?v=MmPTTFff44k&feature=emb_rel_end

QUESTION

How do we see?

VOCABULARY

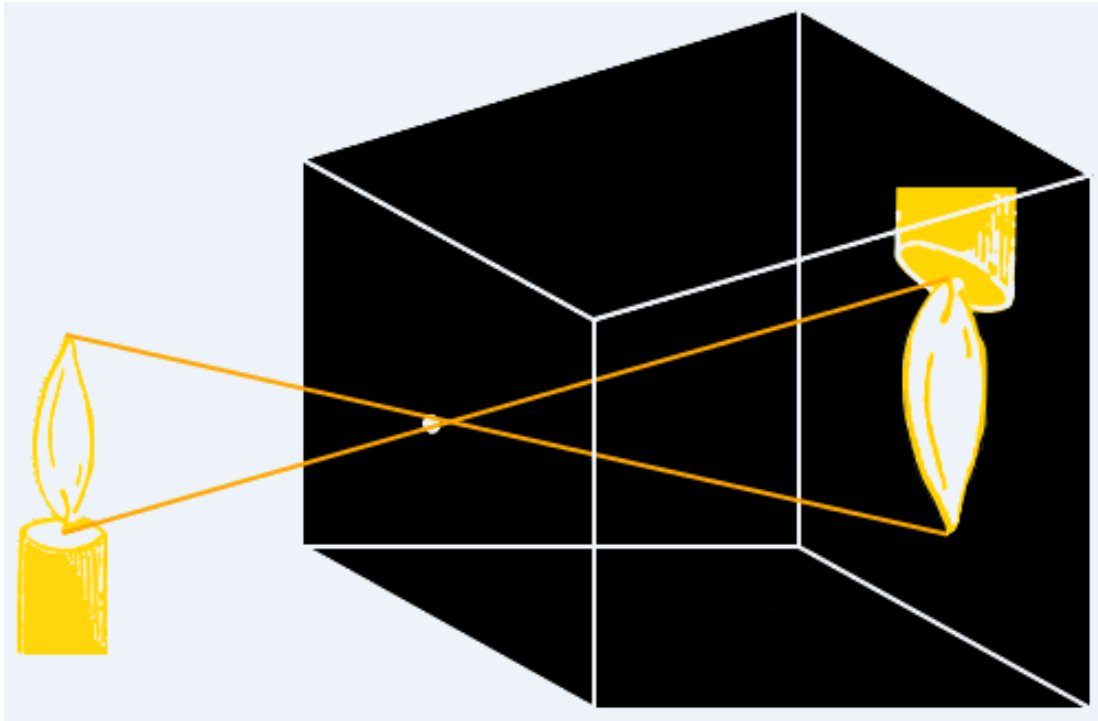
camera obscura, law of refraction, optics, pinhole camera

HISTORY

- Al-Haytham proposed that light reflected off objects and their image entered the eyes
Invented the pinhole camera to demonstrate how the eyes process images
- Al-Haytham was the first to recognize light as a form of energy Identified the retina as the part of the eye that enables vision
- He carried out experiments to prove his theory using what is known as the Camera Obscura
Discovered the law of refraction
- Using a pinhole camera and candles Al-Haytham proved an image is formed by rays of light traveling in straight lines

ACTIVITY

Make a pinhole camera with students.

**RESOURCES**

<https://kids.nationalgeographic.com/explore/books/pinhole-camera>

<https://www.coolkidfacts.com/eye-facts/>

LESSON 2: ALI IBN SINA AKA AVICENA- THE FATHER OF MODERN MEDICINE

WHEN

Born 980 CE

WHERE

Afshana, modern day Uzbekistan

CONTRIBUTIONS

Most famous Muslim physician of his time; Encyclopedist, Mathematician, Astronomer, Philosopher

BOOKS

The Qanun fi al-Tibb or the 'Canon of Medicine' as its known in the west is an Immense Medical Encyclopedia containing more than a million words. It was the standard medical reference work in Europe until the 17th century.

VIDEO

<https://www.youtube.com/watch?v=j-aqQpb9JgM>



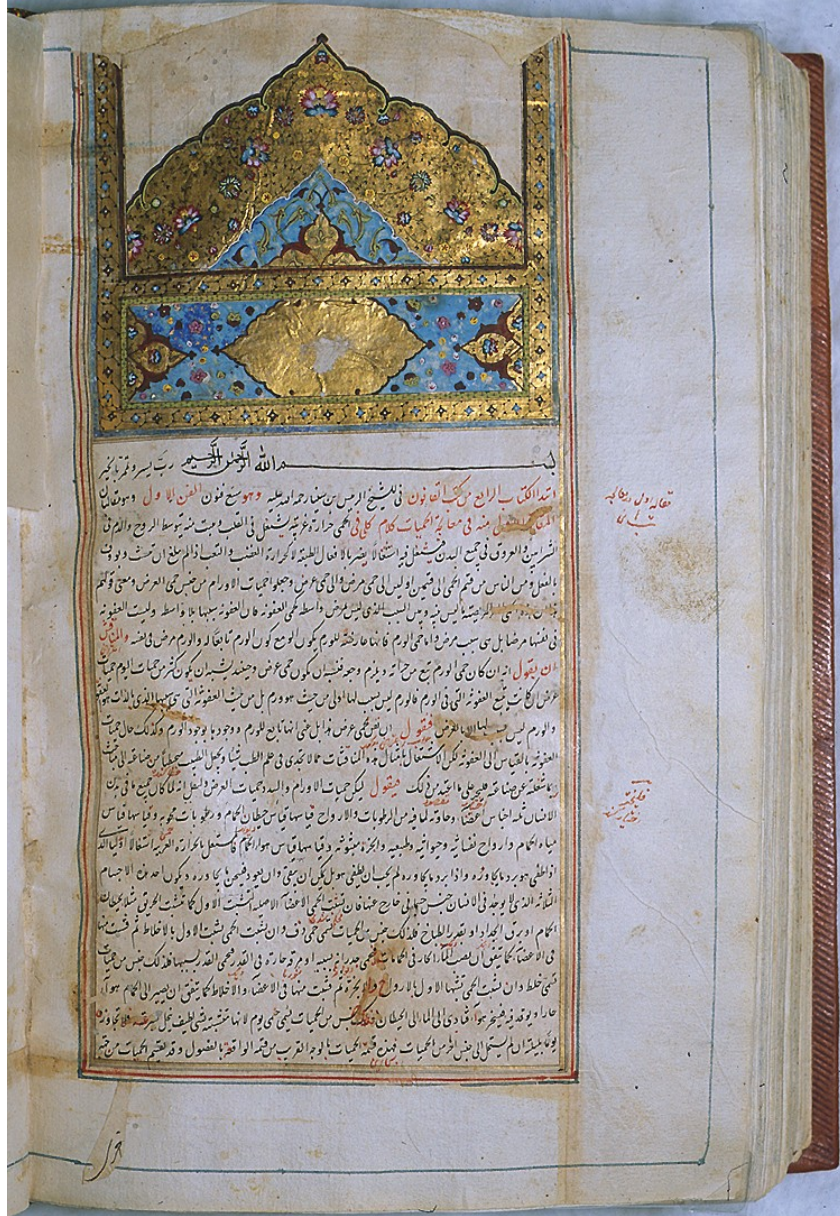


IMAGE AND LESSON REFERENCES

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LESSON 3: JABIR IBN HAYYAM- FATHER OF MODERN CHEMISTRY

WHEN

721-815 CE

WHERE

Tous, Iran – Kufa, Iraq

CONTRIBUTIONS

Chemistry, Alchemy, Engineering, Astronomy, Philosophy, Physics, Pharmacology, Geography, Philosophy

VOCABULARY

chemistry, crystallization, calcination, sublimation, evaporation, acids

HISTORY

- Recognized that experimentation was vital to the scientific process
- Experimentation was his greatest legacy
- Systematized the fundamental chemical processes – distillation, crystallization, calcination, sublimation, evaporation
- Law of Definite Proportions
- Invented chemical laboratory equipment still used today
- Latin translations of his treatises on chemistry became the standard texts in Europe for 500 years

VIDEO

<https://www.youtube.com/watch?v=UgmuF-Ebcqw>

PROJECT

Choose any chemistry project

LESSON 4: AL-JAZARI, - FATHER OF MODERN ENGINEERING

WHEN

136-1206

WHERE

Cisre, modern day Turkey

CONTRIBUTIONS

(Clocks) Elephant Clock, Band Clock, Musical Robot Band Automated Peacock Washing Fountain

HISTORY

Earliest water supply system driven by gears and hydropower Invented automatic gates driven by hydropower

Invented method of controlling speed of rotation of a wheel Books: The Book of Knowledge of Ingenious Mechanical Devices

Robotic Project using Leggos

Mechanical Engineer, Mathematician, Inventor

VIDEO

<https://www.youtube.com/watch?v=18Zt7b9EYzw>



Source: 1001 Discoveries website



Figure 1: Washbasin in the form of a peacock described by Al-Jazari in *Kitab fi Ma'rifat al-Hiyal al-Handisayya*. Manuscript copied in Sha'ban 6002/ March 1205. ([Source](#)).



Figure 2: View of The Elephant Clock: Leaf from a manuscript of Al-Jazari's *Kitab fi macrifat al-hiyal al-handasiyya* dated 715 H/1315 CE. ([Source](#)).

LESSON 5: FATIMA AL-FIHRI

WHEN

800 CE

WHERE

Kairouan, Tunisia

CONTRIBUTIONS

- Founded the world's 1st university al-Qarawiyyin in 859 ce
- Many famous scientists graduated from al-Qarawiyyin university such as Mohammed al-Idrisi and Ibn Khaldoun
- Women's contribution to knowledge, culture, and society
- University was open to everyone regardless of religion or nationality oldest educational institution in the world (placeholder1)



Source: 1001 Discoveries website

VIDEO

https://www.youtube.com/watch?v=-fD_sIUUaVo

ADDITIONAL RESOURCES

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