



MIAMI  
WATERKEEPER®

# WAVES OF CHANGE

## EPISODE 1: "PAST" SUPPLEMENTAL CURRICULUM

### INSTRUCTOR BACKGROUND:

South Florida's history is directly tied to the water. Our coexistence with surrounding **marine and land-based aquatic ecosystems** is generally associated with leisure and tourism; however, the relationship between regional populations and the abundant surrounding water systems dates back centuries before European colonization and US settlement. Florida's history tells a story of codependency with respect and balance. Now, after over a century of **industrialization, development, human migration, and agricultural adaptation**, the ancient origins of South Florida are often hidden beneath the cityscapes. While evidence of human habitation dating from over 2000 years ago is sometimes unearthed when land is broken for construction projects, the natural history of South Florida can still be observed peeking between the developments or on excursions into our marine and Everglades ecosystems. What remains of the South Florida that preceded us and what connections do we have to this region's extensive history?

This lesson plan accompanies the Miami Waterkeeper documentary ***Waves of Change*** Episode 1: "Past". The materials provided are adaptable to several educational standards and can be adjusted for grade levels from middle to high school.

After using this lesson plan, we would love for you to write a short review using the following link to access a survey:  
[Click here to review this lesson plan!](#)

Your responses will help make these resources and future ones better!

[MIAMIWATERKEEPER.ORG/WAVES\\_OF\\_CHANGE](https://MIAMIWATERKEEPER.ORG/WAVES_OF_CHANGE)

## MIAMI WATERKEEPER

Miami Waterkeeper's mission is to ensure swimmable, drinkable, fishable water for all.

Founded in 2010, Miami Waterkeeper defends everyone's right to use and enjoy clean water. Our scope of work is diverse, with focus areas including clean water, ecosystem protection, and sea level rise readiness.

### TIMELINE

INTRODUCTION AND PRE-SCREENING DISCUSSION:	5 MINUTES
WAVES OF CHANGE EPISODE 1 SCREENING:	10-15 MINUTES
REVIEW AND DISCUSSION	10-15 MINUTES
DISCUSSION CLOSER- ACTION PLAN:	5-10 MINUTES
MIAMI'S PAST- NEARPOD ( <i>Quiz/Activities</i> ):	20-25 MINUTES
WORKSHEET: WHERE ARE WE FROM, WHERE ARE WE GOING?	25-30MINUTES/HW
PROJECT: YOUR CONNECTION TO MIAMI HISTORY	

### FLORIDA STANDARDS:

**ELA.7.C.4.1:** Conduct research to answer a question, drawing on multiple reliable and valid sources and generating additional questions for further research.

**ELA.9.C.1.4:** Write expository texts to explain and analyze information from multiple sources, using a logical organization, varied purposeful transitions, and a tone appropriate to the task.

**ELA.9.C.5.1:** Create digital presentations with coherent ideas and a clear perspective.

**SS.8.G.1:** Understand how to use maps and other geographic representations, tools, and technology to report information.

**SS.8.G.2:** Understand physical and cultural characteristics of places.

**SS.912.G.4:** Understand the characteristics, distribution, and migration of human populations.

**SS.912.H.3:** Understand how transportation, trade, communication, science, and technology influence the progression and regression of cultures.

**SS.912.S.6:** Social Change/Examine the changing nature of society.

### STUDENTS BY THE END OF THE LESSON SHOULD BE ABLE TO:

- Analyze and discuss summative ideas from a film screening
- Draw connections between source material and personal research and questioning
- Rely on secondary and primary resources to provide accountable and valid arguments
- Conduct an interview and report on its findings through multiple media
- Study maps to draw conclusions about social and geographic changes
- Make predictions about societal and environmental trends
- Make an argument with a clear thesis and conclusion
- Use management and organizational skills for synchronous and asynchronous learning

## BACKGROUND

Miami Waterkeeper’s documentary *Waves of Change* offers three episodes discussing South Florida’s relationship with the water. Each episode explores how the natural splendor is directly related to societal reliance on aquifers and aquaculture. The South Florida peninsula thrives on a codependency with its marine and land-based ecosystems. Over a century of industrialization, development, and widespread agriculture has impacted the natural resources that fuel society in the region, and without thoughtful attention and direct intervention the land and water may become inhospitable to residents. *Waves of Change* explores these facets of the water’s history in South Florida over three episodes: “Past”, “Present”, and “Our Vision of the Future”.

The following lesson plans are designed to accompany *Waves of Change* Episode 1: “Past”. The materials provided are adaptable to grades 6-12, using state educational standards in Social Sciences and English Language Arts. Subsequent lesson plans for the remaining episodes from the documentary will include STEM-related standards.

## I. INTRODUCTION AND DOCUMENTARY PRE-SCREENING DISCUSSION

### 1. Suggested Discussion Icebreaker: *How far back does Miami’s history go?*

- a. When do you think South Florida was first populated?
  - i. By indigenous populations?
  - ii. By European colonizers?
  - iii. When was Miami-Dade established as an official US municipality?
  - iv. Display the map below and ask for impressions. Note that it is dated 1584.



Geronimo Chaves, *Theatrum orbis terrarum*  
(Antwerp, : Abraham Ortelius, 1584)  
Courtesy of the Special Collections  
Department, University of South Florida

v.

- b. Suggested follow-ups:
  - i. If you imagine the first settlers in South Florida, what do you think life was like for them?
  - ii. What would you consider to be the biggest challenges in starting a settlement in South Florida?
  - iii. Why do you think South Florida was an appealing place for ancient human migration?

### 2. Personal Reflection:

- a. What is your earliest memory of Miami?
- b. What changes in Miami have you seen since your early memories?
- c. What changes do you expect to see in Miami over your lifetime?

### 3. Documentary Lead-In:

- a. “Waterkeeper” is a technical term- a noun. What does it mean to you?
- b. When you hear the phrase “Waves of Change”, what thoughts come to mind?

## II. SCREEN WAVES OF CHANGE EPISODE 1: “PAST”

ENCOURAGE NOTE-TAKING

### III. DOCUMENTARY REVIEW AND DISCUSSION:

#### 1. Open Discussion:

- a. Ask for first impressions or lasting impacts.
- b. Ask if there are follow-up questions or needs for clarification.

#### 2. Guided Discussion:

- a. What historic influences most significantly changed South Florida’s landscape and water systems?
- b. What lasting impacts are observable after over 100 years of development?
  - i. Suggested Follow-ups:
    1. What do you see as the biggest successes of South Florida’s development?
    2. What might have been the most impactful failures?
    3. What are the largest challenges moving forward?
- c. How has the government and the legal system been used to help preserve ecosystems and clean water?
  - i. What is the job of a Waterkeeper?
  - ii. How might a Waterkeeper be of importance to the needs of Miami and South Florida?
  - iii. What can we do to be of assistance to Waterkeepers?

#### 3. Action Steps:

- a. What man-made impacts on Miami’s water have you personally observed?
- b. How might we be individually and collectively responsible for the state of the water?
- c. What can Miami residents do to improve water conditions?
  - i. Suggested Discussion Tracks:
    1. Volunteer Activities
    2. Government advocacy
    3. Information Campaigns and Community Education

#### 4. Closer:

Have students in pairs or small groups review the discussion and draft a short proposal for a possible action step to improve water conditions. This can be a brief elevator pitch, a slogan, or another deliverable of their design. Responses can be posted on a Padlet for future reference and interaction.

### IV. NEARPOD

[HTTPS://SHARE.NEARPOD.COM/E/t4VfF1PHQib](https://share.nearpod.com/E/t4VfF1PHQib)

#### Includes:

- Documentary Review Quiz
- Open Response Prompts
- Slideshow of Lincoln Road (Before/After Development)
- Mapping Exercise
- Collaboration Board
- Class Polls

## **WORKSHEET: WHERE ARE WE FROM, WHERE ARE WE GOING?**

**Includes:**

- Map comparison study
- Historical/Predictive Map designs
- Correlative Analysis
- Personal Reflection

*May be completed in class or as homework*

*Grading is to be determined by teacher discretion*

## **VI. PROJECT: YOUR CONNECTION TO MIAMI HISTORY**

*See the attached assignment criteria for directions*

**Includes:**

- Interview design and delivery
- Independent research
- Multimedia delivery, such as video, podcast, or publication
- Personal reflection
- Thesis and conclusion

*Some components should be worked on in class, but much of this assignment requires asynchronous work time*

*Grading is to be determined by teacher discretion, but a presentation or project rubric is recommended*

# WHERE ARE WE FROM, WHERE ARE WE GOING?

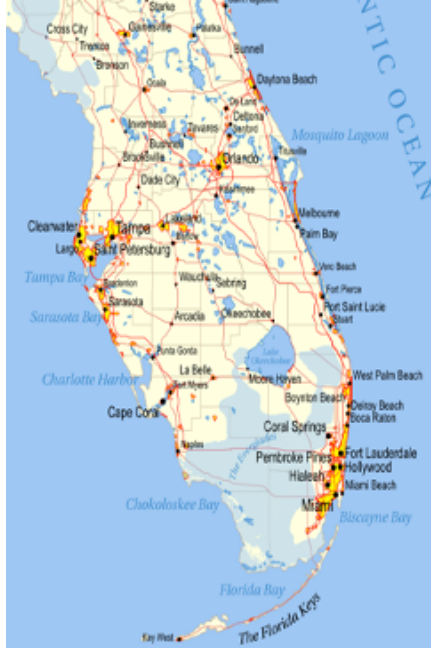
Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

## Mapping the Past and Future:

### I. Compare the two maps below and provide notes on their similarities and differences:



J. H. Young, (Philadelphia, PA: A. Finley, 1827) Courtesy of the Special Collections Department, University of South Florida.



User Kwh, Wikicommons- GIS Map of Florida, 2006

Similarities:

Differences:

**II. After correlating both maps, create an alternative history map of settlement in South Florida, starting during the first establishment of Dade County (1836). Based on material from the Waves of Change documentary episode "Past", how would you have settled the region to preserve and accommodate its ecosystems? Where would you start building the cities we know today? Which areas would you dedicate to agriculture? Which portions would you set up as environmental preservations?**

**Instructions:**

1. Design your own key to explain your markings on this map. These marks must include:
  - a. City names- research the Indigenous tribal regions to find names that represent the ancestral history of each area
  - b. Industries such as agriculture, tourism, and manufacturing
  - c. Major transit routes, such as roads and train systems
  - d. Areas of protected environment, including what features are in them
2. Mark the map using your key. Fill it out as though you shaped the settlement of Florida from the mid-1800's to today.



Florida Center for Instructional  
Technology, Exploring Florida Maps  
(Tampa, FL: University of South  
Florida, 2008)

**III. Create a predictive map of Florida, starting from this year. How might the layout of cities, natural systems, and the shape of Florida evolve in the next 100 years?**

**Instructions:**

3. Design your own key to explain your markings on this map. They must include:
  - a. Cities with names
  - b. Industries such as agriculture, tourism, and manufacturing
  - c. Major transit routes, such as roads and train systems
  - d. Areas of protected environment, including what features are in them
  - e. Areas impacted by environmental challenges and industry
4. Mark the map using your key. Fill it out how you feel the landscape and settlement will change in the next 100 years.



Florida Center for Instructional  
Technology, Exploring Florida Maps  
(Tampa, FL: University of South  
Florida, 2008)



**IV. Mapping Change: Use your previous map correlations and designs to answer the following questions:**

1. Settling into a new space:

A. In what ways do cities coexist with their natural surroundings?

B. What are the benefits of developing a municipality in a pristine location?

C. What are the challenges or risks in building in an undeveloped environment?

2. City-Builder Considerations:

A. What are three priorities settlers should make when developing in a new space?

- Priority 1:

- Priority 2:

- Priority 3:

3. Knowing what you know now, if you had settled South Florida in the 1800's what are three things you would have done differently?

A.

B.

C.

4. In one thesis statement, catchphrase, or slogan, provide advice for future generations planning to build a city in an unsettled location:

## PROJECT: YOUR CONNECTION TO MIAMI HISTORY

To complete this project, you will be required to learn from a relative or member of your community who has an understanding of how Miami has evolved over time. Choose someone who can share their earliest memories of life in Miami. They may not have lived here their whole lives, but should have enough recollections to respond to the prompts provided. This project requires research, designing an interview, improvising follow-up questions, analyzing responses, and developing a presentation that showcases what you have learned from your discussion.

### **Interview Prompt: What impacts from Miami's past are influencing life and the environment in its present?**

1. Interview a person you know who has lived in Miami for a while- the longest, if possible. As you interview them be certain to ask for recollections of the city, environment, and landscape that has evolved over their time here.
2. Use the interview worksheet to help develop and draw conclusions from your discussion.
3. Present your findings in a model of your choosing:
  - Write an interview article using the transcript from your discussion
  - Edit a podcast episode using a recording of your interview
  - Produce a documentary video showcasing your interview
  - Design a blog or vlog using the interview recording or transcript
  - Illustrate a graphic novel using visual representations and quotes from your interview

Some things to consider:

- You may know people who have lived here since birth- among these, the older the interviewee, the more information you may get from them.
- Perhaps you don't know anyone with a long history of living in Miami. If that is the case, then what does "early memories" mean to you and your interviewee?
- As the interviewer, you are shaping the narrative created from your discussion. Consider the themes for your questions and where you want the interview to go.
- Choose the model for your project as early as possible- that way you can shape your interview in anticipation of how you would like to narrate your analysis.

**Make certain you have the approval of your interviewee to record, analyze, edit, and share their responses. If they are uncomfortable with any component of this process, then you should choose another person to interview.**

**Have your interviewee fill out the approval form attached to your worksheet.**

## INTERVIEW WORKSHEET

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

Fill this information in according to the prompts, timeline, and requirements for your work.

### STEP 1: BEFORE YOUR INTERVIEW:

#### **A. Who have you chosen for your interview?**

- a. What is your relationship to your interviewee?
- b. Why have you chosen them as your subject?
- c. What do you anticipate they will discuss?
- d. What do you hope to learn from them?

**B. Interview Template:** These suggested questions can help you plan your interview. **You will need to think of your own follow-up questions** in order to learn more while conducting your interview. Listen attentively and think of what your audience might want to ask. Keep paper for notes on-hand when you conduct your interview.

- a. How long have you lived in Miami?
- b. What are some early Miami memories you can recollect?
- c. How would you describe this city to someone who's never visited?
- d. What are some things about Miami that always seem to stay the same?
- e. What has changed about Miami since your early memories?
- f. What are your favorite things about Miami?
- g. What are your least-favorite things?
- h. Describe one location in Miami that stands out to you.
- i. Tell a specific story that you feel represents a Miami experience.
- j. How do you see Miami changing in the next few decades?
- k. How would you describe the natural parts of Miami and its environment?
- l. How has Miami's environment changed in your memory?

#### **C. Interview Reflection:**

- a. What pattern or theme do you think could be drawn from your interview?
- b. How would you describe the tone or mood of your interview?
- c. What was something surprising or inspiring about the interview?
- d. What detail do you want your audience to remember the most from it?
- e. In retrospect, what is something you wish you had asked?

## INTERVIEW RELEASE FORM

*This information will not be distributed in any way. If you wish to have a copy of the documentary, you may request one to be sent to you via email.*

**Project name:**

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**Date:**

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**Interviewer:**

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**Name of person(s) interviewed:**

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**Email Address/Contact Information:**

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**Date of Birth:**

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By signing the form below, you give your permission for any recordings and/or photographs made during this project to be used by student researchers for educational purposes including publications, exhibitions, Internet streaming, and presentations.

By giving your permission, you do not give up any copyright or performance rights that you may hold.

**I agree to the uses of these materials described above, except for any restrictions, noted below.**

**Name (please print):**

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**Signature:**

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**Date:**

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**Researcher's signature:**

---

**Date:**

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**For the Interviewee: Are there any restrictions you want to place on this publication?**

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