Each Student Will Need:

- Web-Enabled Chromebook, Laptop, PC, or Tablet
- Headphones

Learn more at www.killersnails.com
email: info@killersnails.com

Sharks & Plastic

In Sharks & Plastic, students are introduced to the Digital Science Journal (DSJ) and Augmented Reality (AR) components of WaterWays.

They will view the anchoring phenomenon of a shark vomiting plastic trash. Students make observations about the shark, create a hypothesis, and gather data to test it. Their investigation tracks plastic as it travels through the storm drains and outfalls of Chimhe City, into the local ecosystem!

The lesson extends student knowledge on how human actions affect places and organisms beyond their immediate area. This prepares students to understand and describe the impact of human actions on local ecosystems.

Students who demonstrate understanding can:

- Identify shark anatomy
- Connect shark anatomy's structure to function (adaptations)
- Describe how humans can use GPS tags to track shark movement
- Observe both natural and abnormal contents of a shark's stomach
- Form a hypothesis from observations
- Collect, organize, and interpret data
- Construct an explanation based on evidence
- Identify examples of 3Rs: Reduce, Reuse, Recycle, as well as less common 3Rs: Reform, Reclaim, Refuse
- Explain a personal pledge to prevent plastic pollution

Potential Misconceptions:

- The path of trash in storm drains is likely unfamiliar to most students. While the idea of trash floating in local waterways may not be new, the pathway through storm drains to outfalls likely is.
- The idea that recycling alone does not prevent plastic pollution may be uncomfortable for young students.

SEP

- Developing and Using Models
- Analyzing and Interpreting Data
- Constructing Explanations and Designing Solutions
- Obtaining, Evaluating, and Communicating Information

DCI

- LS1.A Structure and Function
- ETS1.B Designing Solutions to Engineering Problems
- ESS3.C Human Impacts on Earth Systems

CCC

- Systems and System Models
- Cause and Effect

Connections to Excellence in Environmental Education - Guidelines for Learning (K-12)
Strand 1 (Analysis and Interpretation Skills): A, C, E, F, G
Strand 2 (Environmental Processes and Systems): 2.1 A, B. 2.2 A. 2.3 A
Strand 3 (Skills for Understanding and Addressing Environmental Issues): 3.1 A, B, C
Strand 4 (Personal and Civic Responsibility): B, C

ACTIVITY	LEARNING EXPERIENCE	DURATION
Getting Started	Students are introduced to WaterWays and how to use the buttons, DSJ, and AR on their devices.	5 minutes
Introducing...	Students are introduced to an expert ecologist who researches sharks. They watch a video about how sharks are tagged.	3 minutes
Class/Partner Discussion Questions	What do you know about sharks? What are some things you wonder about sharks? What do you think an ecologist might study?	
AR Experience: Shark Anatomy	The webVR page showing the shark may take a minute to load. Students are guided through the structure and function of shark anatomy. Next, they learn about gastric eversion and experience the anchoring phenomenon of a plastic bottle being in the stomach of the shark. This provides context for their research as they place a GPS tag on their own shark.	5 minutes
Welcome Back!	Students are asked to name and explain an adaptation that helps sharks. They will also identify the objects in the shark's stomach.	1 minute
Tracking the Shark	Students drag icons to investigate the movement of the shark they tagged.	1 minute
Make a Hypothesis	Students are introduced to three sources of plastic pollution: outfalls, beach litter, and fishing industry litter, and asked to make a hypothesis by choosing the source that contributed the largest amount of plastic waste to the ocean. Students then respond to the pop up question, "Explain your reasoning. Why do you think [the choice] is the most likely source of plastic bottles like the one in the shark's stomach?"	3 minutes
Class/Partner Discussion Questions	What are some of the plastic items you use in your everyday life? Have you ever seen plastic in the rivers, lakes, or oceans near you? How do you think they got there?	
Testing the Hypothesis, Conclusion	Students use a boat drone to collect data on plastic waste at four self-selected points. Students then analyze the data and reflect on whether the data provides evidence for the source they chose in their hypothesis.	5 minutes
Amazing Journey, Another Journey, The Final Journey	Students complete three mazes that highlight the twisted, yet common, pathways for trash to enter our waterways and investigate how actions can prevent plastic from entering the trash stream. Students answer a pop up question, "What could we do to stop the bottle from getting to the ocean?"	3 minutes
Class/Partner Discussion Questions	How do you dispose of your plastic trash? Do you think something you have thrown away could end up in an outfall? How might that be possible?	
R Verbs, Plastic Drop	Students review the classic 3Rs: Reduce, Reuse, Recycle and match icons. Next, students learn about less common 3Rs: Reform, Reclaim, Refuse, and match images to these terms. Students will then practice and play a game that illustrates how each of the Rs has different strengths and weaknesses.	8 minutes
Class/Partner Discussion Questions	What were the differences between the 6R's? Which action had the greatest impact? Which R was the least impactful? What makes some R actions more difficult to implement? What might be an example of each R?	
The Pledge	Students make a pledge to change their personal plastic usage and illustrate how they would enact their pledge.	3 minutes
Recap	A review page shows how students tagged a shark, tested hypotheses, observed plastic entering the ocean, and generated ideas for solutions.	1 minute
Class/Partner Discussion Questions	Teacher facilitates a summative discussion around the key learning points from the WaterWays experience: tagging sharks for research, testing a hypothesis, observing plastic entering the ocean, generating ideas that help. Possible extension would be to create an action project in class.	

Water's Journey

In Water's Journey, students will view the anchoring phenomena of plastic waste being found on the shore.

Science educator Anna and intern Amy show students how they do a plastic debris survey, and introduce CSO (combined sewer overflow) systems which are responsible for some plastic pollution on shorelines. Students will conduct a debris survey, tallying the amount and types of plastic trash they find.

They will then learn about the systems that bring water to peoples' homes, and what happens to water after it goes down the drain. Three solutions – preventing littering, adding green spaces to soak up rainwater, and conserving water – are used to reduce negative impacts of CSOs in a model city.

The lesson extends student knowledge on the influence of human behavior and infrastructure's impact on waterway pollution.

Students who demonstrate understanding can:

- Collect, organize, and interpret data in a bar chart
- Describe a typical path from a water source, to a home, to wastewater treatment or CSO outfall
- Outfalls contribute to plastic pollution in waterways
- Recognize that both human water use and rainfall contribute to CSO outfall
- Design and implement solutions to address negative consequences of CSO outfall
- Describe why solutions like green spaces, picking up litter, and conserving water work to prevent CSO outfall

Potential Misconceptions:

- The pathway taking trash from streets, through storm drains and sewers, to outfalls into local waterways may not be familiar.
- Few people are aware of how CSO systems work, and students might be surprised that raw sewage flows into local waterways when the system is put under stress.
- The idea that using water during large rain events can contribute to water pollution will likely be new. The systemic nature of this type of pollution is also challenging: pollution is not a consequence of one person's action, but an outcome of the design of the whole sewer system.

SEP

- Developing and Using Models
- Analyzing and Interpreting Data
- Constructing Explanations and Designing Solutions
- Engaging in Argument from Evidence
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DCI

- ETS1-A Defining Engineering Problems
- ETS1-C Optimizing the Design Solution
- ESS2.A Earth Materials and Systems
- ESS3.C Human Impacts on Earth Systems

CCC

- Systems and System Models
- Cause and Effect
- Patterns

Connections to Excellence in Environmental Education - Guidelines for Learning (K-12)
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Strand 2 (Environmental Processes and Systems): 2.1 A, B. 2.2 A. 2.3 A
Strand 3 (Skills for Understanding and Addressing Environmental Issues): 3.1 A, B, C
Strand 4 (Personal and Civic Responsibility): B, C

ACTIVITY	LEARNING EXPERIENCE	DURATION
Getting Started	Students are asked, "Have you ever wondered what happens to water after it goes down the drain?" Students are introduced to the learning goals of the module.	2 minutes
Introducing...	Students are introduced to staff from Hudson River Park in New York City. They watch a video of a marine debris survey. Students then respond to the pop up question, "What's one reason why you might find plastic trash on the shore near an outfall?"	4 minutes
Class/Partner Discussion Questions	What plastic items do you use in your household? What plastic waste might the researchers find? How do you think this plastic ended up in the outfall and then on the shore?	
Plastic on the Shore	Students conduct a debris survey where they collect, tally, and organize data about the types of plastic found on the shore.	4 minutes
Plastic Data	Students create a bar graph from the debris survey data and answer the question, "Which category had the most plastic?"	2 minutes
Water's Journey	Students learn about the path of water in and out of their homes by clicking numbers (1-7) along the path.	3 minutes
Class/Partner Discussion Questions	How do you use water in your home? How do you think the water you use gets into your home? Where does the water in your home go after you use it? Do you think the water that leaves is clean or dirty?	
Your Neighborhood	Students control levels of water usage and rain to investigate how both sources affect the sewer system. A pop-up question asks about the source of water in the sewer.	4 minutes
Your Town	Students learn that more people will share the same sewer system. Students test varying amounts of water usage and rain to see how the system responds. They learn that the streets can flood.	2 minutes
Your Town with a CSO	Students click to add a "CSO" (combined sewer overflow) and test varying amounts of water usage and rain. They observe how increased use and heavy rain can trigger outfall events that pollute the river. Students respond to a pop up question where they identify good and bad things about CSOs.	4 minutes
Class/Partner Discussion Questions	What happens when more people use the same sewer system? Why would a town build a CSO? What are the positive and negative effects of a CSO? Could there be other ways to manage the water?	
Your City	Students grow their town into a city with more people, buildings, and more pavement. Students repeat the testing. Students respond to a pop up question asking where the sewage goes during stress events.	3 minutes
Fill in the Blanks	Students complete three fill-in-the-blanks to summarize three solutions to CSO pollution: building green spaces, water conservation, and picking up litter.	2 minutes
Matching Solutions	Students match pictures to text labels to visualize the three solutions	1 minute
Your City with Solutions	Students click buttons to observe the results of implementing the solutions in their model city.	2 minutes
Class/Partner Discussion Questions	What are the three solutions shown in the game? Have you ever seen any of these solutions in your city? Do you think any solutions are more effective than others? What might be a benefit of implementing multiple solutions together?	
AR: Look and Find	The webVR page showing the outfall may take a minute to load. Students engage in an AR experience and compare the river habitat before, and one year after, implementing solutions.	6 minutes
The Habitat Garden	Students tour Hudson River Park's Habitat Garden and learn how green spaces like this help to prevent CSO outfall events.	4 minutes
Postcard	Students respond to the question, "How will you help to prevent CSO outfall events?" by completing a postcard.	4 minutes
Recap	A review page shows how students found out about the problem, used a model, tried to find a solution, and summarized solutions.	1 minute

Restoring Ecosystem

In Restoring Ecosystem, students will view the anchoring phenomena of ecological problems at Wavy Bay. The oyster reefs have disappeared, there are fewer seals, and the office near the shore has flooded.

Students conduct a wildlife survey to compare Wavy Bay to a healthier site, Seal Beach.

Science expert Caitlin Bartlett introduces students to harbor seals in an aquarium. Students also learn about Dr. Arthur Kopelman's research on wild harbor seals and their behaviors.

Students learn about how oyster reefs improve water quality, increase biodiversity, and reduce flooding. They will hypothesize about what happens after oyster reefs are restored at Wavy Bay.

The lesson extends the student's knowledge of the influence and relationship of water ecology to biodiversity and healthy ecosystems.

Students who demonstrate understanding can:

- Build an estuarine food web and describe how energy moves through it
- Compare features of two similar sites to form and revise a hypothesis
- Link wave action to flooding
- Use nature-based solutions to address flooding, water quality, and biodiversity
- Describe how oysters act as ecosystem engineers by building habitat, improving water quality by filter feeding, and absorbing energy from waves
- Compare data to evaluate a hypothesis and determine whether solutions were effective

Potential Misconceptions:

- Students may need assistance understanding that the arrows in the food web show the flow of energy
- Students might be unfamiliar with coastal flooding and see beaches as places away from where people live.

SEP

- Developing and Using Models
- Analyzing and Interpreting Data
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- Engaging in Argument from Evidence
- Obtaining, Evaluating, and Communicating Information

DCI

- LS2.A Interdependent Relationships in Ecosystems
- LS2.B Matter and Energy Transfer in Ecosystems
- LS2.C Ecosystem Dynamics, Functioning, and Resilience
- LS4.D Biodiversity and Humans
- ETS1-A Defining Engineering Problems
- ETS1-C Optimizing the Design Solution
- ESS2.A Earth Materials and Systems
- ESS3.C Human Impacts on Earth Systems

CCC

- Systems and System Models
- Cause and Effect
- Patterns
- Energy and Matter
- Scale Proportion and Quantity

Connections to Excellence in Environmental Education - Guidelines for Learning (K-12)
Strand 1 (Analysis and Interpretation Skills): A, C, E, F, G
Strand 2 (Environmental Processes and Systems): 2.1 A, B. 2.2 A, C, D. 2.3 A, 2.4 A, E
Strand 3 (Skills for Understanding and Addressing Environmental Issues): 3.1 A, B, C
Strand 4 (Personal and Civic Responsibility): B, C

ACTIVITY	LEARNING EXPERIENCE	DURATION
Getting Started	Students are introduced to the learning goals of the module.	5 minutes
Class/Partner Discussion Questions	What do you know about seals, oysters, and water ecosystems? Is there a connection between seals and oysters?	
Welcome to Wavy Bay	Students visit Wavy Bay and learn that compared to Seal Beach, it has fewer seals, fewer oyster beds, and flooding in the area.	3 minutes
Explore the Differences	Students investigate and compare Seal Beach and Wavy Bay. They click to read about living shorelines, oyster harvesting, and the presence of a CSO site at Wavy Bay.	3 minutes
Class/Partner Discussion Questions	How would the presence of a CSO site affect the area?	
Create a Food Web	Students drag and drop producers and consumers to create a food web.	2 minutes
Meet the Scientists	Students are introduced to Caitlin Bartlett and learn about her work at the NY Aquarium, and Dr. Arthur Kopelman's research about harbor seals.	5 minutes
Make Your Hypothesis	Students respond to the question, "Why do you think fewer seals are found at Wavy Bay than at Seal Beach?" Then, students learn the term nature-based solutions.	4 minutes
AR Experience: Comparing Seal Beach to Wavy Bay	The webVR page showing the outfall may take a minute to load. Students do a wildlife survey and find 10 organisms at Seal Beach and only 4 at Wavy Bay.	6 minutes
Biodiversity	Students are asked which site had more biodiversity. They must choose between Seal Beach or Wavy Bay. Students are reminded about nature-based solutions and are prompted to consider, "What if we use oysters as a nature-based solution to bring the seals back to Wavy Bay?"	4 minutes
Class/Partner Discussion Questions	What is biodiversity? Why is biodiversity important for a healthy ecosystem?	
Meet an Oyster	Students learn about oyster anatomy and that they filter 50 gallons of water a day using cilia to push water over their gills.	4 minutes
Ecosystem Engineers	Students click through simulations to learn the three ways oysters benefit their ecosystem. After each simulation, they respond to a pop up question: 1. When oysters filter plankton and sediment from the water turbidity (Goes Up, Goes Down, Stays the Same)? 2. What happens to the other organisms as the oyster reef grows? (Goes Up, Goes Down, Stays the Same) 3. How do the waves look after they hit the reef? (Bigger, Same, Smaller)	5 minutes
Class/Partner Discussion Questions	In what ways do oysters benefit their ecosystem? What problem might filtering water by oysters solve?	
Matching	Students drag and drop illustrations of the three ways oyster reefs benefit their ecosystem with matching definitions.	2 minutes
Revise Your Hypothesis	Students are asked to revise their hypothesis by considering the question, "Why do you think fewer seals are found at Wavy Bay than at Seal Beach?" Students may offer more than one reason.	4 minutes
Test Your Solution	Students interact with a map to make changes to Wavy Bay and interactive graphs. They must read the graphs to answer a set of questions.	10 minutes
Class/Partner Discussion Questions	What role does turbidity play in the problems found at Wavy Bay? How is it connected to the lower diversity there?	
Evaluate Your Hypothesis	Students review evidence to evaluate their hypothesis about why there are fewer seals found at Wavy Bay than at Seal Beach.	4 minutes
Restoring Wavy Bay	Students select stickers to suggest ideas for restoring Wavy Bay.	4 minutes
Recap	Students review their learning. They observed two habitats, learned about ecosystem engineers, evaluated a hypothesis, and imagined changes.	1 minute

Nature-Based Solutions

In Nature-Based Solutions, students will view the anchoring phenomena of community members sharing problems in their neighborhood such as the heat island effect, air pollution from particulate matter, and flooding.

Students learn how a community meeting is a place for residents to gather, discuss, and propose solutions to local issues.

Students meet Luz Guel, the Director of Community Engagement & Environmental Justice at the Icahn School of Medicine at Mount Sinai, who works with communities across NYC to identify and solve problems like air pollution.

Students learn about seven solutions to these problems, including how trees prevent heat by providing shade and releasing water vapor, help prevent flooding by allowing water to be absorbed into the soil, and how particles stick to leaves which lowers air pollution. They will apply these solutions to solve heat, air pollution, and flooding issues in the community.

The lesson extends a student's knowledge of their influence within a community and explores the process of retrofitting communities so that environmental issues are factored into daily life.

Students who demonstrate understanding can:

- Identify issues in their neighborhood.
- Define the problems such as flooding, heat island effect, and air pollution.
- Develop and model nature-based solutions.
- Model best solutions for each problem based on evidence and community feedback.

Potential Misconceptions:

- Students may believe that objects such as concrete are sources of heat, rather than understanding how those objects keep things warm by trapping heat.
- Students may believe air pollution is present only if it is visible.
- Students may believe that flooding primarily or only happens near rivers or streams.

SEP

- Developing and Using Models
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DCI

- LS2.C Ecosystem Dynamics, Functioning, and Resilience
- ESS3.B Natural Hazards
- ESS3.C Human Impacts on Earth Systems
- ETS1.B Designing Solutions to Engineering Problems

CCC

- Systems and System Models
- Cause and Effect
- Patterns
- Energy and Matter

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Strand 3 (Skills for Understanding and Addressing Environmental Issues): 3.1 A, B 3.2 A, B, C, D
Strand 4 (Personal and Civic Responsibility): B, C

ACTIVITY	LEARNING EXPERIENCE	DURATION
Getting Started	Students are introduced to the learning goals of the module.	1 minute
Lucy's Walk	Students click icons to guide their dog, Lucy, on a walk, and discover that their neighbors are concerned about flooding, heat, and air pollution.	3 minutes
Class/Partner Discussion Questions	Have you observed or experienced any of the problems you are learning about?	
What's a 'Community Meeting'?	Students meet Luz Guel who is the Director of Community Engagement & Environmental Justice at the Icahn School of Medicine at Mount Sinai. Luz discusses how they partner with members of the community in NYC to identify and solve problems like air pollution.	3 minutes
Class/Partner Discussion Questions	Why does Luz Guel feel it is important to partner with community members to effect change? Why is particulate matter and air pollution a problem?	
Defining the Problem	Students learn about the specific problems their neighbors have, and drag and drop the text to organize problems into categories.	4 minutes
Community Ideas	Students click through and learn about proposed solutions from their neighbors and icons appear for each one.	4 minutes
AR Experience: Tree Models	The webVR page showing the tree may take a minute to load. Students look at how trees can help address flooding, temperature, and pollution.	6 minutes
Class/Partner Discussion Questions	Where do you find trees in your community? Have you experienced any of the benefits of trees that we observed in the game? Where might you place trees to solve a problem? Why?	
Fill in the Blanks	Students fill in the blanks to describe the benefits of trees.	2 minutes
Draw Your Solutions	Students add stickers to reimagine what their community could look like with new solutions.	3 minutes
Test Your Solutions	Students gauge the effectiveness of each solution by observing changes in meters for heat, air pollution, and flooding. In each scenario, progression is contingent upon correct answers.	5 minutes
Select Your Solutions	Students use what they've learned and design a solution for the community's problems. They are limited to selecting 3 solutions.	3 minutes
Class/Partner Discussion Questions	Which solutions triggered the meters to go down the most? Why do you think that is?	
What Does the Community Think?	Students respond to questions from their neighbors asking which solution addresses their particular problem (air pollution, flooding, and heat). Each question is followed by a request for an explanation of how the design works.	4 minutes
Implementing Your Plan and Design	Students learn the community is interested in their plan. Students learn how the solutions might be implemented by individuals and the local government.	2 minutes
A Few Years Later!	Students read a news report called "Block Buzz" which recaps the improvements in the neighborhood.	1 minute
Recap	Students review their learning. They learned about problems in their community, attended a community meeting, learned how trees help, and designed a plan to solve community problems!	1 minute

Evaluating Progress

Throughout the WaterWays series, students became ecologists and worked all over Chimhe City! In this final module, students will learn from Siddhartha and Zoe, science educators with Hudson River Park, about the WasteShark, a plastic collection drone.

Students will then revisit the beach to collect evidence of changes made in the community. Then students will review the "R" verb strategies used by the community in reducing plastic waste on the shoreline from the CSO.

Next, students look closely at their neighborhood in order to spot the implemented improvements such as rain barrels, roof gardens, trees, reflective paint, permeable surfaces, no-idling laws, and more public transportation. Students revisit Lucy's walk to evaluate and categorize whether the changes impacted human or environmental health.

Students revisit Wavy Bay through an AR experience and examine how restoring the oyster reefs increased the diversity of ocean life. The data collected here is compared to their earlier survey. Students revisit Wavy Bay through a map activity.

Then students will choose one of the scenarios to elaborate on and create a poster with an evidence-based explanation, ready to present to their classmates the way real scientists share and discuss their work. Lastly, students will create an action plan to improve their own community using ideas and solutions from WaterWays.

Students who demonstrate understanding can:

- Collect, compare, and analyze data from graphs and charts
- Interact with a variety of models to identify patterns
- Summarize and communicate the impacts of changes made in an ecosystem
- Construct a claim and support it with evidence

Potential Misconceptions:

- Students might feel uncomfortable with the lack of immediacy to their implemented changes and how consistent behavioral change coupled with the installation of green solutions has benefits over time.

SEP

- Developing and Using Models
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DCI

- LS2.C Ecosystem Dynamics, Functioning, and Resilience
- ESS3.B Natural Hazards
- ESS3.C Human Impacts on Earth Systems
- ETS1.B Designing Solutions to Engineering Problems

CCC

- Systems and System Models
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Strand 4 (Personal and Civic Responsibility): B, C

ACTIVITY	LEARNING EXPERIENCE	DURATION
Getting Started	Students continue their work as ecologists by collecting and comparing data before and after changes are implemented. Lastly, they will present findings to their community of scientists.	4 minutes
Introduction	Students are introduced to Siddhartha and Zoe, science educators with Hudson River Park, and learn about HRP's WasteShark, a plastic collection drone.	6 minutes
Class/Partner Discussion Questions	What is an ecologist? What activities does an ecologist do? How have you acted in the role of ecologist in this game?	
Plastic on the Shore Revisited	Students drag plastic waste to labeled bins and create a graph of the waste. This is then compared to results from before the city instituted changes.	4 minutes
Class/Partner Discussion Questions	How is the plastic used in our neighborhoods connected to the plastic pollution problems in the waterways and beaches? What does "CSO" stand for? What is a CSO?	
Old Data vs New Data	Students analyze a graph that shows data of plastic waste on the beach before and after changes in the city. Students respond to two questions about the graph.	4 minutes
Reviewing the R Verbs	Students drag and drop puzzle pieces of the city to investigate how people have reduced plastic litter.	5 minutes
Explain the Changes at the Shore	Students put pictures in order, illustrating before the change, changes made, and after the change. Students then explain how the changes reduced the amount of plastic trash.	2 minutes
Class/Partner Discussion Questions	What changes were made in the city to reduce the amount of plastic pollution? Why did these changes reduce the amount of plastic waste found on the shore?	
Spot the Difference	Students compare before and after pictures and identify the seven changes made.	5 minutes
Lucy's Walk Revisited	Students repeat their neighborhood walk, revisiting the neighbors and categorizing the improvements as benefiting human or environmental health.	6 minutes
Explain the Changes in Your Neighborhood	Students put pictures in order to illustrate before the change, changes made, and after the change. Students then explain how adding improvements shaped human and environmental health.	3 minutes
AR Experience: Diversity Survey	The webVR page showing the tree may take a minute to load. Students use augmented reality to do a wildlife survey, measuring biodiversity in Wavy Bay after oyster reef restoration.	6 minutes
Wildlife Survey Comparison	Students compare biodiversity survey results in Wavy Bay.	4 minutes
Class/Partner Discussion Questions	How did restoring the oyster reefs help support more biodiversity in Wavy Bay? What other benefits might restoring the oyster reefs have?	
Restore Reef Revisited	Students investigate a map of Wavy Bay and use it to select the benefits of restoring the oyster reef in Wavy Bay.	4 minutes
Explain the Changes at Wavy Bay	Students put pictures in order to illustrate before the change, changes made, and after the change. Students then explain how restoring the oyster reefs improved biodiversity.	3 minutes
Choose a Topic	Students review the three issues and select one to elaborate on and share with other scientists.	3 minutes
Create a Poster	Students create an image for their poster, illustrating the issue and changes.	5 minutes
Evidence For Your Poster	Students compose text, using evidence that supports how the change improved their chosen issue.	4 minutes
Class/Partner Discussion Questions	How can you connect your experiences with WaterWays to your life? Can you envision changes in your own neighborhood?	
Recap	Students review their learning.	2 minutes