

# Our Changing Landscape

## INQUIRY QUESTION

How can we respond to our changing landscape?

## INQUIRY PRODUCT

Written Product

## DESCRIPTION

Our relationship to the physical world around us begins with our own geographical location and the physical features of that location. In this Inquiry, students explore natural resources, how and why we modify the landscape, and the impacts that modifications can have on land, water, and living things. Then, they consider how to take action in their community in response to the changing landscape.

## Launch

### Module 1 Launch the Inquiry

Students begin the Inquiry with an engaging, thought-provoking activity to hook them into the inquiry process. They are introduced to the Inquiry Question and their initial Investigation Questions begin to surface. There is no pre-teaching required to start students on their inquiry journey.

### Objectives

- Identify natural and human-made features of landscapes
- Compare landscapes from the past and present to describe changes over time

## Lesson and Description

## Objectives

**CORE** 1. Hook: Changing Landscapes  
Students launch an investigation into ways that the physical world changes over time. They begin to consider how these changes may impact themselves and their communities.

- Identify natural and human-made features of landscapes
- Compare landscapes from the past and present to describe changes over time

**CORE** 2. Generating Investigation Questions  
Students participate in a QFT protocol to generate the Investigation Questions that will guide their exploration of landscapes changing over time.

- Generate meaningful questions about landscapes changing over time with support of question words (Who, What, Where, When, Why, How)
- Collaborate to generate, evaluate, and select questions

## Investigation

**Module 2** What do sources tell us about the landscape?



Students examine a variety of sources to explore their landscape. They identify the geographic features of their state, connect everyday items back to their origins as natural resources, and explore how geography, including climate and weather, impacts their lives. Then, they consider how and why landscapes have changed over time.

### Objectives

- Analyze a variety of types of maps to identify geographic features
- Describe geographic features of the local state or region
- Describe natural resources and how they are used, including those of the state or region
- Describe the climate of the state or region and how it affects daily life

### Checkpoint Assessment

- Review the [Reflecting on Our Landscape](#) [handout](#)
- Observe and track students over the course of the module's activities and interactions; look and listen for:
  - Examples of natural features of a landscape
  - Examples of how the landscape affects daily life
  - Use of evidence when making observations and inferences about the landscape
  - Adherence to protocol: listens, takes turns, contributes

Lesson and Description	Objectives
<p><b>CORE</b> 1. Our Geography Students identify geographic features, including those in their own state, as they hone their map skills. They work toward an understanding of how features like landforms and bodies of water affect daily life.</p>	<ul style="list-style-type: none"> <li>• Interpret a map in order to identify landforms and bodies of water</li> <li>• Use a map key or legend to interpret symbols on a map</li> <li>• Make observations and inferences about the locations of natural and human-made features</li> <li>• Draw conclusions about the relative locations of natural and human-made features using evidence from the map</li> <li>• Exchange ideas through discussion</li> </ul>
<p><b>CORE</b> 2. Natural Resources Students learn how natural resources are transformed into things that we need. They explore local natural resources to draw connections between geography, way of life, and the availability of resources.</p>	<ul style="list-style-type: none"> <li>• Identify and describe natural resources and how they are used, including those of their state or region</li> <li>• Draw connections between natural resources and the landscape</li> <li>• Exchange ideas through discussion</li> </ul>
<p><b>CORE</b> 3. Climate and Weather Students are introduced to climate maps as another source to learn about landscape. They investigate the relationship between climate and way of life, including their local climate and their state's way of life, in the context of geography.</p>	<ul style="list-style-type: none"> <li>• Explain what climate maps are and how they are used</li> <li>• Analyze maps and images to gather information about climate in different areas</li> <li>• Use evidence to show how climate affects way of life in different areas</li> <li>• Describe the climate of their state and how it impacts daily life</li> <li>• Exchange ideas through discussion</li> </ul>



**EXT** 4. Landscapes Then and Now  
 Students examine images of the same location in different time periods to make observations and inferences about how and why the landscape has changed. Select this Extension lesson to provide scaffolding for the observation and inferencing task in the upcoming checkpoint assessment.

- Generate observations and inferences about how a landscape has changed over time
- Describe changes in the landscape over time in images (such as photos, maps, and satellite images) based on knowledge and inferences
- Exchange ideas through discussion

**CORE** 5. Reflecting on Our Landscape **CHECKPOINT ASSESSMENT**  
 Students reflect on learning from the module to focus their thinking on the natural features of their own landscape. They connect back to the Inquiry Question and revisit their Investigation Questions.

- Visually represent the ways they interact with the natural features of their state or region
- Explain how the natural features of the landscape affect daily life in their state or region
- Reflect on the information that sources provide about the landscape
- Synthesize source evidence to reflect on the landscape
- Exchange ideas through discussion

**Module 3** How do humans depend on the environment?

Students explore how people depend on natural resources to meet their needs for food, water, shelter, and air. They look at how natural features determine which resources people can access and how easily they can access them. By focusing on meeting needs, they begin to build a framework to understand how changes to the landscape are sometimes necessary for survival.

**Objectives**

- Describe basic survival needs of living things (food, water, shelter, and air)
- Identify natural resources, including air, sunlight, water, and resources from the land (soil, rock, wood)
- Describe ways that humans use available natural resources to meet their basic needs
- Explain how access to natural resources impacts way of life

**Checkpoint Assessment**

- Review the [Survival Plan handout](#)
- Observe and track students over the course of the module’s activities and interactions; look and listen for:
  - Use of evidence when describing how and why humans depend on the environment for survival
  - Examples of ways people use natural resources to meet their basic needs
  - Evidence-based inferences about challenges and opportunities for meeting needs in different environments
  - Adherence to protocol: listens, takes turns, contributes

**Lesson and Description**

**Objectives**

**CORE** 1. Meeting Our Basic Needs  
 Students learn how the people depend on their environment for survival. They learn that living things require air, water, food, and shelter. They explore how people use natural resources to meet these needs and the importance of conserving them.

- Identify basic survival needs of living things
- Identify natural resources, including water, air, and resources from the land (soil, rock, wood)
- Describe how humans use natural resources to meet their basic needs
- Exchange ideas through discussion



**CORE** 2. Accessing Water in Different Environments  
Students learn how people access water in different environments. They explore creative solutions for when freshwater is scarce, ultimately recognizing that clean water is a limited and essential resource that must be conserved for the future.

- Explain why water is a basic survival need
- Describe ways that people meet their need for water, including when it is scarce
- Use a case study to explore how access to water impacts way of life
- Exchange ideas through discussion

**EXT** 3. Food Production Past and Present  
Students explore how changes to access and production over time and across communities have impacted the landscape. They learn how people depend on the environment for food, and how the food they eat connects them to the landscape.

- Explain why food is a basic survival need
- Explain the connection between food and natural resources
- Generate observations and inferences about changes in food production and access over time
- Exchange ideas through discussion

**CORE** 4. How Shelters Connect to Their Environments  
Students look at how shelters vary based on climate and available natural resources, then apply what they've learned to design their own shelter. They reflect on the challenges and opportunities that arise when meeting needs in different environments.

- Explain why shelter is a basic survival need
- Identify natural resources that are used to build shelters
- Make evidence-based inferences about the relationship between shelters and climate
- Collaborate with a partner to design a shelter suited to a specific environment

**CORE** 5. Reflecting on Basic Needs  
Students apply their knowledge about how people depend on their environment to meet basic needs in an imaginary location. They are challenged to use evidence about how they could meet their needs with available natural resources.

- Describe how and why people depend on the environment for basic survival needs
- Identify the natural resources available in an imaginary environment
- Develop an evidence-based conclusion about the best location for survival

**CORE** 6. Survival Plan **CHECKPOINT ASSESSMENT**  
Partner Critique  
Students cultivate a growth mindset as they practice giving kind, helpful, and specific feedback to their peers during a partner critique protocol. At the end of the lesson, they apply the feedback they received and revise their work.

- Apply kind, helpful, and specific feedback with increasing independence
- Provide a balance of warm, cool, and suggestion feedback to a piece of work
- Form complete critique sentences with limited prompting
- Apply feedback when making their final drafts

#### **Module 4** What happens when humans modify the landscape?

Students examine how modifications to the land can both help and hurt the environment. They investigate a variety of human modifications to the landscape to understand their purpose. Then, they explore how population growth and urbanization impact the landscape, ultimately building an understanding that some changes to the landscape are made not just for survival but also to accommodate growth.

#### **Objectives**

- Describe some human modifications to the landscape
- Explain how and why humans modify their environment
- Describe benefits, challenges, and consequences related to modifications to the landscape

#### **Checkpoint Assessment**



- Review the [Impact of Modifications handout](#)
- Observe and track students over the course of the module’s activities and interactions; look and listen for:
  - Observations about modifications to the land
  - Evidence-based inferences about how modifications have impacted the land, water, or living things
  - Adherence to protocol: listens, takes turns, contributes

Lesson and Description	Objectives
<p><b>CORE</b> 1. Introduction to Modifications Students begin to explore how and why humans modify the landscape. They gather evidence about the purpose of various modifications and make inferences about how these modifications impact land, water, and living things.</p>	<ul style="list-style-type: none"> <li>• Analyze images to infer purposes and impacts of human modifications to the land</li> <li>• Exchange ideas through discussion</li> </ul>
<p><b>EXT</b> 2. Modifications Research Students learn more about the purposes of specific human-made modifications to the landscape and make inferences about how these modifications impact land, water, and living things. They engage in guided research before sharing their findings with each other.</p>	<ul style="list-style-type: none"> <li>• Conduct guided research about the purpose and possible impact of a modification</li> <li>• Describe the purpose of an assigned modification (ex. bridges, tunnels, dams, canals)</li> <li>• Make inferences about the impacts of an assigned modification on land, water, or living things</li> <li>• Exchange research findings through discussion</li> </ul>
<p><b>CORE</b> 3. Growing Population, Growing Impact Students investigate how communities expand, resulting in a greater need for buildings, homes, food, and transportation. They consider how the formation and growth of towns and cities impacts the landscape.</p>	<ul style="list-style-type: none"> <li>• Gather textual evidence about how needs change as the population grows</li> <li>• Investigate benefits and challenges of modifications to the landscape due to growing populations</li> <li>• Exchange ideas through discussion</li> </ul>
<p><b>EXT</b> 4. Trees as a Landscape Modification Students explore a critical natural resource through the lens of balance. They consider the effects of both deforestation and the planting of trees as examples of human modifications to the landscape.</p>	<ul style="list-style-type: none"> <li>• Gather evidence from multiple sources about the role and uses of trees</li> <li>• Identify how humans modify the landscape by planting or removing trees</li> <li>• Make inferences about the impacts these modifications have on the land, people, and other living things</li> <li>• Exchange ideas through discussion</li> </ul>
<p><b>CORE</b> 5. Reflecting on Modifications <b>CHECKPOINT ASSESSMENT</b> Students reflect on learning from the module and represent the purpose and impact of landscape modifications through words and pictures. They connect back to the Inquiry Question and revisit their Investigation Questions.</p>	<ul style="list-style-type: none"> <li>• Explain how and why humans modify the landscape to meet needs</li> <li>• Describe impacts related to modifications to the landscape</li> <li>• Engage in collaborative discussion</li> </ul>



Students explore how individuals have taken action in response to challenges brought about by human modifications to the landscape. They conclude this module by reviewing key learning from the Inquiry to help them prepare to take action. They work together to develop an Inquiry Challenge Statement that describes the action they will take, the product they will create, the people they will affect, and the goals they will work toward in the Action Module.

**Objectives**

- Use case studies to investigate how communities address challenges in their landscape or surroundings
- Describe steps people can take to help address local, regional, or global problems related to the landscape
- Identify challenges and opportunities related to the local landscape

**Checkpoint Assessment**

- Review the My Community Action Idea handout
- Track your observations of students over the course of the module’s activities and interactions; look and listen for:
  - Examples that describe how people in a community work together to address a problem in their changing landscape or surroundings
  - An example that identifies a connection between case studies or a challenge in their own landscape
  - Adherence to protocol: listens, takes turns, and contributes

Lesson and Description	Objectives
<p><b>CORE</b> 1. Case Study: Saving Baby Turtles Students explore how human actions can impact the landscape. They examine a case study to identify how young people identified a problem, made a plan, and took action to help animals in the local landscape.</p>	<ul style="list-style-type: none"> <li>• Identify and classify case study evidence related to identifying problems, planning solutions, and taking action</li> <li>• Describe how people might work together to address problems in their landscape</li> <li>• Exchange ideas through discussion</li> </ul>
<p><b>CORE</b> 2. Case Study: Farming in a City Students explore a creative solution to a food production problem. They examine a case study to investigate how people in a community worked together to improve access to fresh food in an unlikely farming environment.</p>	<ul style="list-style-type: none"> <li>• Identify and classify evidence from a case study related to identifying problems, planning solutions, and taking action</li> <li>• Describe how people might work together to address a community need</li> <li>• Exchange ideas through discussion</li> </ul>
<p><b>EXT</b> 3. Case Study: Restoring the Landscape Students consider the important connection between healthy land and a healthy community. They examine a case study to learn how Wangari Maathai helped the land and her community, identifying the steps she took along the way.</p>	<ul style="list-style-type: none"> <li>• Identify and classify evidence from a case study related to identifying problems, planning solutions, and taking action</li> <li>• Describe how individuals can work to address environmental problems</li> <li>• Exchange ideas through discussion</li> </ul>



<p><b>EXT</b> 4. Exploring Environmental Challenges Students investigate topics of choice to learn more about actions that can address environmental challenges to the landscape. They share findings with classmates and draw connections to local opportunities.</p>	<ul style="list-style-type: none"> <li>• Gather and classify information from multiple sources</li> <li>• Use evidence to describe how individuals can work to address environmental problems that can arise when people modify the landscape</li> <li>• Engage in collaborative discussion to share and elicit findings</li> <li>• Draw connections between research findings and personal opportunities for action</li> </ul>
<p><b>CORE</b> 5. Synthesizing Findings and Drawing Conclusions <b>CHECKPOINT ASSESSMENT</b> Students reflect on their learning from throughout the Inquiry to draw conclusions about changes to the landscape. They collaborate to generate ideas about challenges and opportunities that they might address as a class as they prepare to take informed action.</p>	<ul style="list-style-type: none"> <li>• Reflect on findings about changes in the landscape</li> <li>• Explain how individuals can address a problem by finding a solution and taking action</li> <li>• Generate ideas about ways to address challenges and opportunities related to changes in their own landscape</li> <li>• Engage in collaborative discussion</li> </ul>
<p><b>CORE</b> 6. Constructing the Inquiry Challenge Statement In this lesson, students transition from investigation to action. They consider the content they have explored, the relevant knowledge they have gained, and the questions they have asked (acknowledging that some may have remained unanswered and new questions may have emerged) to decide how to create an Inquiry Product that has an authentic impact.</p>	<ul style="list-style-type: none"> <li>• Reflect on learning about changing landscapes to identify problems and opportunities in the world around them</li> <li>• Collaborate to construct an Inquiry Challenge Statement that will guide them in taking informed action</li> </ul>

## Take Action

### Module 6 Take Informed Action

Students shift focus in this module, using the conclusions and key findings from their investigation to impact the world beyond their classroom. The lessons guide students through the stages of the design process, including brainstorming and developing their ideas, creating a prototype, evaluating and improving their work based on feedback, and preparing to share the work publicly. Finally, they reflect on the knowledge and skills they developed during their inquiry journey.

#### Objectives

- Draw on disciplinary concepts to explain opportunities for addressing local, regional, or global problems
- Generate, evaluate, and implement ideas to act on civic challenges in the school or wider community, and predict possible results of those actions
- Use a range of deliberative and democratic procedures to make decisions about effective courses of action
- Take ownership of work in terms of quality, degree of challenge, revision, and completion

#### Checkpoint Assessment



- Review students' final Inquiry Products using your customized [Inquiry Product rubric](#)
- Observe and track students over the course of the module's activities and interactions; look and listen for:
  - Examples to identify what makes the work strong or areas for improvement
  - Explanation of connection between work and Inquiry Product rubric Success Criteria
  - Progress toward Inquiry Product rubric Success Criteria
  - Feedback that is kind, helpful, and specific
  - Demonstration of growth mindset by accepting and considering feedback
  - Positive contributions to civil discourse (ex. values others' ideas, remains on topic, assumes shared responsibility)

Lesson and Description	Objectives
<p><b>CORE</b> 1. Brainstorm: Comparing Models to Develop Success Criteria</p> <p>Students compare models of the products they will create, identifying specific elements that make these examples successful and generating ideas for Success Criteria that they can use to guide and evaluate their own work.</p>	<ul style="list-style-type: none"> <li>• Critically analyze models to identify what makes a product successful or unsuccessful</li> <li>• Generate ideas for Success Criteria</li> <li>• Engage in collaborative discussion</li> </ul>
<p><b>EXT</b> 2. Brainstorm: Team Norms</p> <p>Students work together to define what they need from each other to be successful as a team, whether that team is the whole class or their Inquiry Product Group. This lesson helps students develop awareness of how they collaborate with others and to form a common language to use when challenges arise.</p>	<ul style="list-style-type: none"> <li>• Generate ideas about effective team dynamics</li> <li>• Select ideas to generate team norms</li> <li>• Engage in collaborative discussion</li> </ul>
<p><b>CORE</b> 3. Brainstorm: Generating Ideas for the Work</p> <p>Students generate, evaluate, and select ideas for the content of their Inquiry Product. In the next lesson, they will use these selected ideas to create a prototype of their product.</p>	<ul style="list-style-type: none"> <li>• Generate ideas for the content of the Inquiry Product</li> <li>• Evaluate and select ideas for an effective product using Success Criteria in the <a href="#">Inquiry Product rubric</a>, and any constraints, as a guide</li> <li>• Give meaningful feedback to peers</li> <li>• Use feedback to develop work</li> </ul>
<p><b>CORE</b> 4. Prototype: Outlining the Written Work</p> <p>Prototyping, or creating a rough draft, is the next step in the design process. For Written Products, the prototype is an outline. Students use the ideas that they generated in the brainstorm session to create their outlines.</p>	<ul style="list-style-type: none"> <li>• Design and create an outline to plan the Inquiry Product</li> <li>• Explore a variety of solutions for the most effective product</li> </ul>
<p><b>CORE</b> 5. Improve: Critiquing Rough Drafts</p> <p>Students use a small-group critique protocol to give and receive kind, helpful, and specific feedback on their rough drafts. They use this feedback to identify next steps in their work.</p>	<ul style="list-style-type: none"> <li>• Give meaningful critique feedback</li> <li>• Accept and use feedback to form a revision plan</li> <li>• Engage effectively in group discussion</li> </ul>





<p><b>CORE</b> 6. Improve: Developing the Work In this teacher-guided work session, students apply critique feedback to develop the next draft of their work. If needed, this lesson could be repeated to allow for multiple work sessions.</p>	<ul style="list-style-type: none"><li>• Take ownership of work in terms of quality, degree of challenge, revision, and completion</li></ul>
<p><b>EXT</b> 7. Share: Practicing to Present the Work Students practice talking about their work to prepare them to present, either formally or informally. They also give and receive feedback in order to help strengthen their ability to present. The resulting verbal explanations of the work can provide the teacher with additional assessment insights.</p>	<ul style="list-style-type: none"><li>• Practice and reflect upon ability to present work</li><li>• Give meaningful feedback to peers</li><li>• Engage effectively in group discussion</li></ul>
<p><b>CORE</b> 8. Reflect: Revisiting the Inquiry Challenge Students reflect on the Inquiry as a whole now that they have shared their completed Inquiry Products. They reflect upon their successes, struggles, and strides by revisiting content and skills that were the focus of the Inquiry. In doing so, students lay a groundwork for continued growth in future projects.</p>	<ul style="list-style-type: none"><li>• Identify successes, struggles, and personal growth</li><li>• Reflect on the degree to which the project was successful in meeting the overall goal</li></ul>

