

## EPA EnviroAtlas Educational Curriculum

### About EnviroAtlas

EPA's EnviroAtlas is a free, interactive, web-based tool that empowers anyone with internet access to be a highly informed local decision-maker. Providing over 400 map layers and supported by over 700 scientific journal articles, EnviroAtlas equips users with the data and information to answer many of their environmental questions.

### EnviroAtlas Education Materials

EPA has designed a free suite of EnviroAtlas educational lesson plans and resources for kindergarten through undergraduate (K-16) classrooms that leverage the EnviroAtlas tool. The lessons allow students to engage in hands-on learning, using data visualization to build their analytical, geospatial, and decision-making skills.

Concepts addressed in the lessons include ecosystem services, watershed geography and management, the water cycle, air quality, urban planning, biodiversity, and connections between the environment and human health.

The educational materials make use of two primary tools in EnviroAtlas: the Interactive Map, and the Eco-Health Relationship Browser. *Learn more about EnviroAtlas and access these tools at: [www.epa.gov/enviroatlas](http://www.epa.gov/enviroatlas).*



Left: High school students participate in the hands-on activity from the “Connecting Ecosystems and Human Health” lesson plan package. Right: Students play outdoor BINGO from the “Introduction to Ecosystem Services” lesson plan package.

### Alignment to State Science Standards

All EnviroAtlas educational materials are aligned with Next Generation Science Standards and individual state science standards. All aligned standards can be found in the back of the teacher handout accompanying each lesson in the “Resources” section.

### Lesson Plans and Resources

#### Lesson 1: Exploring Your Watershed (Grades K-6)

This interactive lesson-plan module encourages students to explore their local watershed through a hands-on lab, an outdoor exploratory session with maps, and an EnviroAtlas web-mapping

session that can be completed with or without internet. This lesson plan is also available in Spanish.

Available online at:

[www.epa.gov/enviroatlas/exploring-your-watershed](http://www.epa.gov/enviroatlas/exploring-your-watershed)

#### Lesson 2: Introduction to Ecosystem Services (Grades 4-6)

This suite of six mini-lessons introduces the concept of ecosystem services through a blended learning format to get kids outside; engage students with an interactive, online, cutting-edge technology tool from EPA; and have students participate in hands-on activities in their classrooms. These lessons can supplement ecosystems units across grade levels. Available online at:

[www.epa.gov/enviroatlas/introduction-ecosystem-services](http://www.epa.gov/enviroatlas/introduction-ecosystem-services)

### Lesson 3: Connecting Ecosystems and Human Health (Grades 4-12+)

This engaging lesson plan module introduces students to the connections between ecosystems and human health by using an interactive web-based tool and a hands-on activity. The module incorporates an outdoor lesson, a hands-on lesson, and EPA’s Eco-Health Relationship Browser – an online tool that uses existing scientific literature to visualize connections between human health and the environment.

Available online at:

[www.epa.gov/enviroatlas/connecting-ecosystems-and-human-health](http://www.epa.gov/enviroatlas/connecting-ecosystems-and-human-health)

### Lesson 4: Building a Greenway: A Case Study (Grades 9-12+)

This interdisciplinary learning module promotes student discovery using available maps and data, engaging students to be collaborative decision-makers.

This case study is intended for secondary education, undergraduate, and community education/engagement programs.

Available online at:

[www.epa.gov/enviroatlas/building-greenway-case-study](http://www.epa.gov/enviroatlas/building-greenway-case-study)

### Access the educational materials

To download EnviroAtlas educational materials visit: [www.epa.gov/enviroatlas/enviroatlas-educational-materials](http://www.epa.gov/enviroatlas/enviroatlas-educational-materials).

### Contact Information

For questions about the educational materials or EnviroAtlas, contact the EnviroAtlas Team at: [enviroatlas@epa.gov](mailto:enviroatlas@epa.gov).

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## MATERIALS OVERVIEW

*The educational modules are time-flexible, adaptable, and incorporate an outdoor component to help connect students with their local environment. All modules also contain teacher instructions, handouts, assessments, and answer keys.*

Grade Level	Lesson Title	Topics Covered	Lesson Adaptations/Versions
K-6	Exploring Your Watershed	watershed geography, water cycle, water quality, pollution, maps	<ul style="list-style-type: none"> <li>English &amp; Spanish</li> <li>ESL (English as a second language)</li> <li>K-3: coloring page, word search, comic strip</li> <li>Student-led (with instructions)</li> <li>Teacher-led (no student instructions, has teacher script)</li> <li>With/without internet</li> </ul>
4-6	Introduction to Ecosystem Services	ecosystem services, air quality, water quality, human health	<ul style="list-style-type: none"> <li>All lessons scale-up in complexity (Lesson #1 is the easiest, Lesson #6 involves complex analogies)</li> </ul>
4-12+	Connecting Ecosystems and Human Health	human health, ecosystems, ecosystem services, evidence-based discussion	<ul style="list-style-type: none"> <li>Elementary-level notecards</li> <li>Upper-level notecards: double-sided and single-sided</li> <li>With/without internet</li> </ul>
9-12+	Building a Greenway: A Case Study	mapping, city-planning, decision-making, ecosystem services, green space, debate	<ul style="list-style-type: none"> <li>With/without internet</li> <li>Different roles for students</li> </ul>