

# American Eels

Topics: Life cycle, migration, habitats



Department of  
Environmental  
Conservation

**GRADE LEVEL: K-3**

## Big Ideas:

- Animals adapt to living in their environments.
- Animals need both living and nonliving things to survive.
- A habitat includes certain characteristics/qualities for different animals.
- Animals have different life cycles.

## Learning Objectives: *students will be able to...*

- Compare and distinguish between different types of animal habitats.
- Identify the behaviors and adaptations that allow eels to survive in their environment.

## New York State Science Learning Standards:

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.

1-LS1-2 Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.

2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.

3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction and death.

3-LS2-1. Construct an argument that some animals form groups that help members survive.

3-LS4-2 Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.

3-LS4-3 Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

## Key Understandings:

- Animals have internal and external parts to help them survive.
- Animals change and develop over time.
- Plants and animals have adaptations to help meet their basic needs.
- Animals depend on their surroundings to get what they need including food, water, shelter, and a place to raise their young.
- Many animals travel long distances over their lives.
- American eels need many habitats during their lives to survive.
- Some young animals are similar to, but not exactly like their parents.
- Maps show where things are located.

## Essential Questions:

- How do animals adapt to living in their habitat?
- What do animals need to survive in their habitat?
- Why do animals have different habitats?
- How do animals depend on each other and their environment to survive?
- How does the American eel's external features help it survive?
- How does the American eel change in appearance as it grows from one stage to another in its life cycle?

### **Students will know...**

- What a life cycle is, and the sequential life stages of the American eel.
- Key vocabulary terms.
- What a habitat is, and the importance of habitats.
- The migration patterns of the American eel.
- The different habitats that an American eel uses during its life.

### **Vocabulary:**

- **Adaptation:** a feature that allows an organism to deal with environmental conditions.
- **Behavioral adaptation:** an adaptation involving the way an animal acts.
- **Physical adaptation:** an adaptation involving the form of an organism.
- **Habitat:** the place where a given plant or animal lives,
- **Life cycle:** the stages of form and activity through which a living thing passes as it develops from a beginning stage to an adult able to reproduce and restart the cycle.
- **Migration:** the movement from one place to another.

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**Learning Plan:** We recommend doing these lessons in sequential order; however, they can be done as individual lessons. Lessons have multiple links (videos, songs, diagrams, activities) that can be used at the teacher's discretion depending on class time. Some of these activities may be a little complex for the K-1 group, and modifications may have to be made.

**Pre-assess:** Use K-W-L to assess students' prior knowledge, have students write or draw in response to the essential questions.

**Progress Monitoring:** Formative assessment and teacher feedback should be ongoing throughout the lessons. Teachers should develop assessments based on their individual class needs. Think-pair share, exit tickets, interactive discussions, questions and listening, informal observations, quizzes and student work samples can all be used.

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**Lesson 1: Growing up as an American Eel-** Students follow the life cycle of the American eel by listening to a video-story, then create a model of a life cycle of an American eel.

- [Video](#): The Eel Story & [Spanish Version](#)
- Growing up as an American Eel [Student Reading and Activity](#) & [Teacher Section](#)
- Eel Life Cycle [Poster](#)

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**Lesson 2: Where do American Eels come from?** Students watch videos about eel migration, then follow the life cycle of the American eel by mapping their migration routes. Students learn about migration, habitats, and oceans using basic math and graphic skills.

- Video: [Eli the Eel, A Mysterious Migration](#)
- Video: [American Eels](#). This video features a science educator from the Norrie Point Environmental Education Center
- Where do American Eels Come From? [Student Activity](#) & [Map](#)

**Lesson 3: Eel Habitat Diorama-** Students create an eel diorama by illustrating or creating a model of an eel habitat then listen to a story of animal migrations.

- Create an Eel Habitat Diorama [Student Activity](#)
  - Migration Story Time: Video recording of the book [Bird, Butterfly, Eel](#)
  - Be an Origami Naturalist: American “Glassy” [Eel Craft](#)
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**Lesson 4: Eels and Ladders-** Students will play a game where they will climb up and down eel ladders to get their eel to safety.

- Eels and Ladders [Student Activity](#)
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Teachers: Would you like to visit us at Norrie Point environmental education center, or have an educator visit your classroom in-person or virtually? Contact us to schedule a program: [hrteach@dec.ny.gov](mailto:hrteach@dec.ny.gov)

#### Resources:

##### Children’s books:

- [Bird, Butterfly, Eel](#) by James Prosek
- [Think of and Eel](#) by Karen Wallace
- [Ellie and Ollie Eel, a Tale of a Fantastic Voyage](#) by Susan Tate
- [River](#) by Elisha Cooper

##### Websites:

- [The Hudson River Eel Project](#) (NYSDEC)
- [U.S Fish & Wildlife Service Eel Page](#)
- [All About American Eels](#) Infographic (PBS Nature)
- [Video: The Mystery of Eels & Eel Project](#) (PBS Nature)
- [Chesapeake Bay Program American Eel](#)