

Andrea & Liz:

Songs and Stories for Science Learning (Butterflies, Frogs, & Flowers) Educational Guide, Grades PK-1



About the Performance

Frogs and Butterflies: Join Andrea & Liz to learn about frogs, butterflies, and other creatures that live in ponds and bogs, through interactive songs and stories from several cultures. Students will act out the life cycle of a butterfly, and participate in songs about frogs and their life cycles. They'll also learn about creature habitats and learn the importance of respect for the Earth and our fellow creatures.



About the Artist

Liz Buchanan sings and plays high-energy, danceable tunes for kids and their families. As a singer-songwriter, she has recorded four CDs, receiving accolades from Parents' Choice, Creative Child Magazine and School Library Journal. She has performed and taught in the greater Boston area for more than 20 years.

Andrea Lovett is an award-winning storyteller. Her love of nature and folktales often influences the stories she chooses to tell. She believes stories and storytelling help to build strong, healthy and connected communities.

Program Learning Goals

1. Students will understand that the life cycles of creatures and plants follow a logical sequence, with a beginning, middle and end.
2. Students will learn the meaning of vocabulary words relating to the life cycle of frogs and butterflies, including metamorphosis, chrysalis, polliwog, gills, lungs.
3. Students will make connections between science content and folk tales and songs from American and world cultures (STEAM).

Essential Questions

1. How do creatures change as they grow?
2. What is our responsibility to care for the plants and animals around us?
3. Why is it important to respect and care for the earth and living creatures?

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Important Vocabulary

- **Metamorphosis:** Change in form or habits as some animals transform from immature to mature phase
- **Life Cycle:** The series of changes in the life of an organism
- **Environment:** The surroundings or conditions in which a person, animal, or plant lives or operates
- **ALSO:** Chrysalis; Tadpole; Polliwog; Gills; Lungs; Nectar; Proboscis; Camouflage; Bog



Bogs, Marshes, and Swamps

Bogs, marshes, and swamps are different kinds of *wetlands*. They are wet and have lots of plants and nutrients. Frogs, butterflies, and other creatures live here.



Post-Show Discussion Questions for Students

1. What are the different stages in the life cycle of a frog?
2. What are the different stages in the life cycle of a butterfly?
3. Do humans have a life cycle? How do we change as we grow?
4. What can we do to help make sure that frogs and butterflies continue to survive and thrive on our earth?

Pre-Show Activity: The Very Hungry Caterpillar

Read or watch the story *The Very Hungry Caterpillar* written and illustrated by Eric Carle, and ask yourself these questions:

1. How did the caterpillar change throughout the story?
2. Why do you think the caterpillar was so hungry?
3. What did the caterpillar start out as at the beginning of the story?
4. What did the caterpillar change into at the end of the story?



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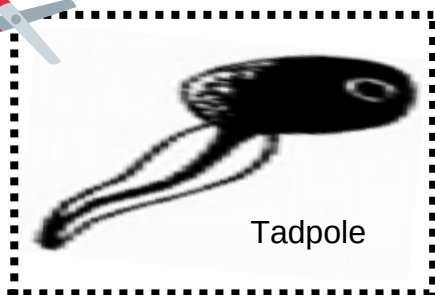
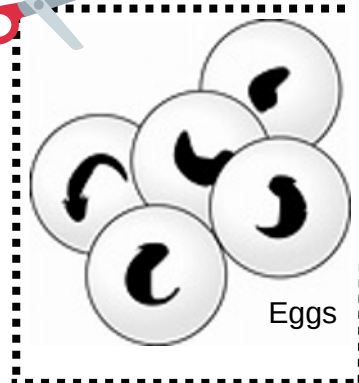
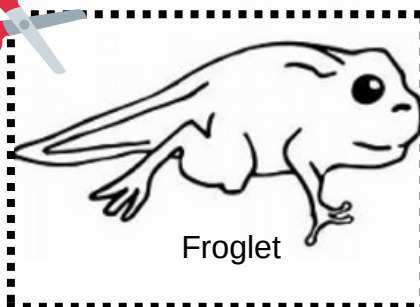
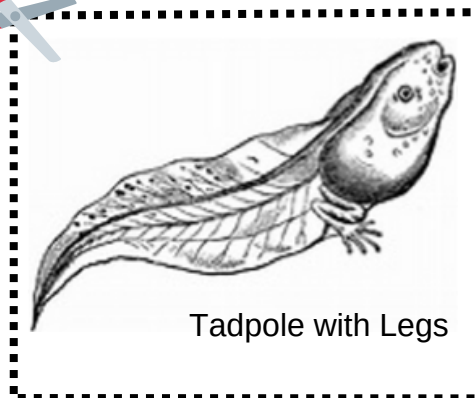
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Post-Show Activity: Sequencing the Life Cycle of a Frog

- Watch the video about The Life Cycle of a Frog

[Click here to watch The Life Cycle of a Frog video](#)

- Cut out the pictures below. You can color them in if you like.
- Can you put the pictures in order? What comes first? What comes next? What comes last?



- Using your pictures, can you tell a parent, your teacher, a sibling or a friend, the story of the life cycle of a frog?
- Think about your life cycle? How have you changed as you got older? Can you draw or write the story of your life cycle?

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Curricular Connections

Music PreK-1:

Creating 1. Generate and conceptualize artistic ideas and work (PK-K.M.Cr.01)

2. Organize and develop artistic ideas and work.

a. Focus on and pursue a process or idea to completion during play and experimentation with music. (PK-K.M.Cr.02.a)

Responding 7. Perceive and analyze artistic work. (PK-K.M.R.07)

8. Interpret intent and meaning in artistic work. (PK-K.M.R.08)

Music 1-2:

Performing: 6. Convey meaning through the presentation of artistic work. (1-2.M.P.06)

Responding 9. Apply criteria to evaluate artistic work. Demonstrate active listening as an audience member. (1-2.M.R.09)

Earth & Life Science PreK-2

PreK-ESS2-1(MA). Raise questions and engage in discussions about how different types of local environments (including water) provide homes for different kinds of living things.

PreK-LS1-1(MA). Compare, using descriptions and drawings, the external body parts of animals (including humans) and plants and explain functions of some of the observable body parts.

PreK-LS1-2(MA). Explain that most animals have five senses they use to gather information about the world around them.

PreK-LS1-3(MA). Use their five senses in their exploration and play to gather information.

PreK-LS2-1(MA). Use evidence from animals and plants to define several characteristics of living things that distinguish them from non-living things.

PreK-LS2-2(MA). Using evidence from the local environment, explain how familiar plants and animals meet their needs where they live

K-LS1-1. Observe and communicate that animals (including humans) and plants need food, water, and air to survive. Animals get food from plants or other animals. Plants make their own food and need light to live and grow.

K-LS1-2(MA). Recognize that all plants and animals grow and change over time.

1-LS1-1. Use evidence to explain that (a) different animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air, and (b) plants have roots, stems, leaves, flowers, and fruits that are used to take in water, air, and other nutrients, and produce food for the plant.