

**Andrea & Anna:**

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



### About the Performance

**Frogs and Butterflies:** Join Andrea & Anna 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 habitats and learn the importance of respect for the Earth and our fellow creatures.



### About the Artists

**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.

**Anna Adler** was raised in a family of musicians and storytellers, and received formal training in piano, voice, and trumpet. Today she delights in engaging young children and families through music.

### 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, and 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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## 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**. These are places where water covers the soil and have lots of plants and nutrients. Frogs, butterflies, and other creatures live here.

## Pre-Performance Activity: The Very Hungry Caterpillar

Read or watch the story "**The Very Hungry Caterpillar**" written and illustrated by Eric Carle, and talk about 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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### Post-Performance Discussion Questions

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?



### Post-Performance Activity: Sequencing the Life Cycle of a Frog

- Watch the video called “Tadpoles to Frogs”



#### [Youtube: Tadpoles to Frogs](#)

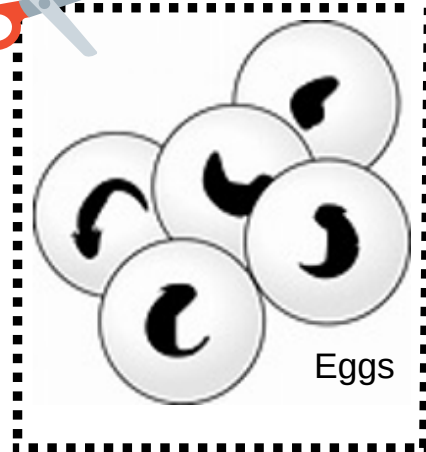
- Cut out the pictures on the next page. You can color them in if you like.
- Can you put the pictures in order? What comes first? What comes next? What comes last?
- Using your pictures, can you tell a parent, your teacher, a sibling or a friend, the story of the life cycle of a frog?
- Think about your life cycle. How have you changed as you got older? Can you draw or write the story of your life cycle?



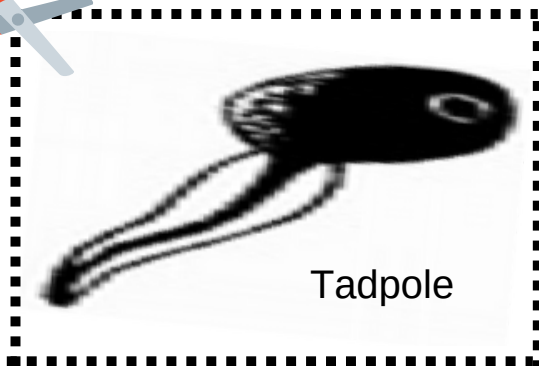
Adult Frog



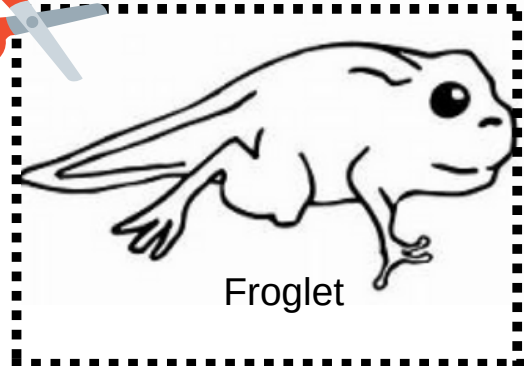
Tadpole with Legs



Eggs



Tadpole



Froglet

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## Curricular Connections

### Arts Standards: Music

#### Creating

- Generate and conceptualize artistic ideas and work. (PK-K.M.Cr.01, 1-2.M.Cr.01)
- Organize and develop artistic ideas and work. (PK-K.M.Cr.02.a, 1-2.M.Cr.02)

#### Performing

- Convey meaning through the presentation of artistic work. (PK-K.M.P.06, 1-2.M.P.06)

#### Responding

- Perceive and analyze artistic work. (PK-K.M.R.07, 1-2.M.R.07)
- Interpret intent and meaning in artistic work. (PK-K.M.R.08, 1-2.M.R.08)
- Apply criteria to evaluate artistic work. (PK-K.M.R.09, 1-2.M.R.09)

#### Connecting

- Synthesize and relate knowledge and personal experiences to make art. (PK-K.M.Co.10, 1-2.M.Co.10)

### English Language Arts and Literacy Anchor Standards

#### Speaking and Listening

- Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally. (SL.PK-12.2)
- Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric. (SL.PK-12.3)

### Science and Technology/Engineering

#### Earth and Space Sciences

- Earth's Systems (PreK.ESS.2, K.ESS.2)
- Earth and Human Activity (PreK.ESS.3, K.ESS.3)

#### Life Science

- From Molecules to Organisms: Structures and Processes (PreK.LS.1, K.LS.1, 1.LS.1)
- Ecosystems: Interactions, Energy, and Dynamics (PreK.LS.2)
- Variation of Traits (PreK.LS.3)
- Heredity: Inheritance and Variation of Traits (1.LS.3)

