

**Grades: 4-5**

## **SciGirls, “Frog Whispers”**

This series showcases bright, curious real girls putting science and engineering to work as they answer questions and make unexpected discoveries in the world around them. When St. Louis SciGirls find the amphibian population is decline, they hop to it! Alanna, Madison, Amanda and Clara hit urban and rural sites to compare frog and toad calls and report on their amphibian neighbors.

**After watching this episode, choose from the following questions and/or tasks to extend your learning**

### **Question Box 1**

- What does Lauren, the frog watch leader, want the SciGirls to do?
- What is an “indicator species”?
- How do the girls learn to identify frog and toad calls?
- How do the girls use the information from the waveform to make a frog chorus?
- What instruments/tools do the girls use to mimic frog calls in their chorus?
- What do the girls decide to study and why?
- Where do the girls go to study frogs in a rural setting?
- What are some conditions a “field worker” might experience?
- The girls decide on a protocol for observations. What is calling intense and does the time of observation matter. Why or why not?
- How do the girls ensure that the observation is as natural as possible?
- Compare and contrast the observations and recordings of frogs and toads from the rural and urban setting.

### **Question Box 2**

- What did/do you enjoy about this program?
- How would you feel sitting in the dark observing and recording sounds of nature?
- Think of an effective way to communicate with each other if it was dark and you had to be completely silent?
- Make a connection between what Izzy and Jake are doing and what the SciGirls are doing.
- Think of a way to ensure the accuracy of the number and type of frogs and toads recorded in both the rural and urban setting.

### **Box 3 (Tasks)**

- If the frog population started at 100 frogs and declined by 5 frogs every day, when

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would there be 80 frogs? If the toad population started at 120 and declined by 10 frogs every day, what would the toad population be after the third day. Share your reasoning.

- Use a Venn diagram to compare and contrast a frog and a toad.
- What are some of the differences in rural vs. urban amphibian populations? Conduct your own field study on birds, frogs or crickets found in your neighborhood.
- Record what you see and/or hear.
- Make a comparison from day to night or from different locations.
- Fill out a data chart
- Report your findings using a bar graph.

[https://nces.ed.gov/nceskids/graphing/classic/bar\\_pie\\_data.asp?ChartType=bar](https://nces.ed.gov/nceskids/graphing/classic/bar_pie_data.asp?ChartType=bar)

#### **Box 4 (Enrichment)**

- In Greek, “Amphi” means both, and “Bio” means life. With this in mind, why is Amphibian a good name? especially for frogs.
- What are some of the reasons the frog and toad populations are in decline?
- Draw a model of a Frog life cycle.
- Draw a model of a Toad life cycle.

#### **Box 5 (Extend/Real-Life)**

- Go to this link to learn about California frogs  
<http://www.californiaherps.com/frogs/frogscalls.html>. Click on the sound links to hear each frog and click on the more sounds button to learn more about that frog.
- Select one frog that you are most interested in learning more about and create a poster all about the frog. Where it lives, picture, scientific name, what it eats, etc. Present your poster to a family member.
- Describe with evidence why it's important to maintain amphibian populations in urban populations.
- Research and describe the types of amphibians in the area you live.
- Would you consider a career as a herpetologist? (not sure what that is google it)