



Who is Calling Tonight?

Objectives:

Students will record and identify species of frogs and toads calling in their neighborhood and compare the time of year against average statewide calling dates.

Materials needed:

VDGIF Frog and Toad Guide with CD of calls available at www.shopdgif.com

Access to ArcView or a map of the community

Recording devices such as smart phones or cassette recorders, optional

Background:

Each spring the night is filled with the calls of Virginia's twenty eight species of frogs and toads. Although it may sound like *just noise*, the experienced ear can pick out the call of each species the way some individuals can pick out each instrument in a symphony. Virginia's frog and toad symphony begins in January with the Wood Frog and Little Grass Frog. They are followed by the Spring Peeper and several of the Chorus Frog species in February. The night time symphony continues into October with some species calling all summer and other species going quiet.

Only the male of each species call and each species has their own distinctive call recognized by members of the same species. Within each species there are several types of calls including; **advertisement** for mates, **encounter** calls when they meet a rival and are defending their territory, **release** calls when a male is grabbed by another male who mistakes it for a female and a **distress** call that may be designed to startle a predator into releasing it so it can make its escape.

Calling begins as the weather warms and often after a heavy spring rain. Even in the most urban Virginia communities, you may be able to hear American toads or other species calling after a storm. Virginia frog and toad habitats are very diverse from woodlands to small ponds or lakes. Most species are limited to a region of the state; a few species can be found statewide. Statewide species will begin calling in the coastal plain of Virginia earlier than the same species in the Blue Ridge Mountains and valleys.

Procedure:

Choose 3-4 species common in your region, the Spring Peeper, American Bullfrog, Fowler's Toad and Green Frog are found statewide. Provide information for each species along with range maps and life history from <http://www.dgif.virginia.gov/wildlife/information/?t=1> and listen to the Frog and Toad Call CD provided with the VDGIF Guide to Frogs and Toads. The chart below may help students to hear and learn the different calls.

Spring Peeper	<i>Peep, peep, peep</i>
Carpenter Frog	<i>Pu-tunk, pu-tunk, pu-tunk</i> (like hammering)
Green Frog	<i>Plunk, plunk, plunk</i> (like plucking a guitar string)
Bullfrog	<i>Ba-rum, ba-rum, ba-rum</i>
Wood Frog	<i>k-wack, kwack, k-wack</i> (like ducks)
Pickerel Frog	<i>Zzz...zzz...</i> (like distant snoring)
American Toad	<i>Trillllll...</i> (long uninterrupted trill)
Green Treefrog	<i>Quank, quank, quank</i>
Squirrel Treefrog	<i>waak, waak, waak</i>

Once the students can identify local frogs from their calls the students can listen for each species at home or at a local park or natural area during the evening hours. Don't forget to send home a note to parents explaining what the students are listening for and the need to be outside. Parents may want to join their sons and daughters outside. If the frog cannot be identified, suggest that the student record the call and bring it to the class for possible identification

Students should record an estimated number and each species of frogs heard on a data sheet similar to the one below.

Frog Calling Survey

Student Name: _____ Date: _____

Location frogs were heard:

Home

Park or natural area _____

Weather including temperature:

Habitat Description:

Time of day	Species	Estimated number of calls in 5 minutes

Using ArcView to record the locations or place a colored dot on a community map where each species was heard calling. Record the date a species was first heard noting weather conditions and the latest date the species was heard calling. Data and recordings made of local frog calls can be entered into the Virginia Wildlife Mapping program to help manage local amphibian populations now and later <http://www.inaturalist.org/projects/virginia-wildlife-mapping>. Keeping this information from year to year will provide long term data on the population's status in the area.

Students can also conduct a habitat survey, measuring distance to the nearest body of water from their listening spot and noting if there is evidence of breeding, egg masses or tadpoles.



What Frogs Are You Hearing?

Virginia Frog Phenology (Calling/ Breeding Periods)

Species	Calling/ Breeding Period									
	Late Jan.	February	March	April	May	June	July	August	September	October
American Bullfrog					Early Season	Early Season	Early Season	Early Season		
Green Frog					Early Season	Early Season	Early Season	Early Season		
Pickerel Frog				Mid-season	Mid-season					
Southern Leopard Frog*			Mid-season	Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		Late Season
Atlantic Coast Leopard Frog**			Mid-season	Mid-season	Mid-season					
Wood Frog	Early Season	Early Season	Early Season	Early Season						
Carpenter Frog				Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
Barking Treefrog					Early Season	Early Season	Early Season	Early Season		
Green Treefrog				Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
Squirrel Treefrog				Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
Pine Woods Treefrog					Early Season	Early Season	Early Season	Early Season		
Gray Treefrog				Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
Cope's Gray Treefrog				Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
Northern Cricket Frog				Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
Southern Cricket Frog				Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
Spring Peeper*		Early Season				Late Season				
Little Grass Frog	Early Season	Early Season	Early Season	Early Season	Early Season	Early Season	Early Season	Early Season		
Mountain Chorus Frog			Mid-season	Mid-season	Mid-season	Mid-season	Mid-season			
Brimley's Chorus Frog		Early Season	Early Season	Early Season						
Upland Chorus Frog		Early Season	Early Season	Early Season	Late Season					
New Jersey Chorus Frog		Early Season	Early Season	Early Season						
Southern Chorus Frog			Mid-season	Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
American Toad			Mid-season	Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
Fowler's Toad				Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
Southern Toad			Mid-season	Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
Oak Toad				Mid-season	Mid-season	Mid-season	Mid-season	Mid-season		
Eastern Narrow-mouthed Toad					Early Season	Early Season	Early Season	Early Season		
Eastern Spadefoot			Mid-season	Mid-season	Mid-season					

* Southern Leopard Frogs and Spring Peepers are known to periodically call during warm, rainy evenings in the fall.

** Recently described species to Virginia and calling/breeding phenology is not fully understood.