



VIRTUALLY WILD! COMMUNITIES

ACTIVITY GUIDE FOR
JESSE H. JONES PARK
& NATURE CENTER



So you watched a *Virtually Wild! Communities* video with your class. Now what? There's a lot to unpack but worry not. We have a few activities to get you started.

Themes from Jesse H. Jones Park and Nature Center:

- Snakes
 - Venomous vs non-venomous
 - The value of snakes for controlling pests
 - How snakes hunt
- Alligator Snapping turtle
 - animals luring their prey
- Animals
 - Camouflage/mimicry
 - Animal identification (Copperhead vs other snakes)
- Ecosystems
 - invasive species

Resources:

- [Jesse H. Jones Park and Nature Center](#)
- [HERE in Houston Website](#)

Good Reads from the Houston Public Library:

[Nic Bishop Snakes](#) by Nic Bishop

[Cottonmouth](#) by Deb Tuttle Nelson

[Map and Track Wetlands](#) by Linda Barghoorn (includes information about swamps and the animals that live there)

Activity Guide for Virtually Wild! Communities

Snakes, for Goodness' Sakes

Activity # 1 Helpful Friend, or Deadly Foe?	Time Required: 30 mins
Lesson Developers: Emma Wilson, Alicia Mein-Johnson, Jesse H. Jones Park and Nature Center	Materials: - TPWD snakes alive FAQ for kids - Houston Audubon Society's snake guide - iNaturalist Houston Area Snake Guide
Objectives: ❖ Discuss students' beliefs about snakes ❖ Learn about snakes' life cycle and diet ❖ Reflect on the services snakes provide and the threat that humans pose to snakes	Grade Level - Science & Social Studies K-2 – 1-4, 8, 9, 10 & 3, 4 3-5 – 1-4, 8, 9, 10 6 – 1-4, 12 & 5 7 – 1-4, 10-12, 14 & 8 8 – 1-4, 11
Procedures	
Time	Activities
5 min	I. Motivation/Warm Up -Ask students if they think snakes are good, bad, scary, cool, etc. Ask students if they have ever held a snake and what it felt like. (It's not slimy!)
15	II. Information - Snake life-cycle and social structure: Snakes can lay eggs, or give birth to live snakes, and they eat eggs bugs or larger animals. Snakes can eat rats and pests including other snakes. They are solitary and do not live in social groups. Small snakes can live up to 12 years, and larger snakes for more than 40 years. - Are they dangerous? Snakes eat eggs or live animals, and usually strike and disable prey, some grasping it in their coils, while others use teeth to grab prey or fangs to inject venom. Some species of snake are dangerous to humans, but they are also frequently eaten by larger predators or trampled by deer. Because of this, they're generally shy and will not attack us unless provoked. The best thing to do if you find an unknown snake is to leave it alone.
10	III. Practice - Common Snakes: Houston is home to a wide variety of both venomous and non-venomous snakes. Houston Audubon Society has a guide without photos that links to more resources, and iNaturalist has a guide with photos that you can use to learn about local snakes. If you have a natural feature (bayou, trees, etc.) near the school, you can talk about species of snakes that could live there.
	IV. Application -Send students to the iNaturalist Houston Area snake guide and let them pick a snake to learn more about. Look at maps/ecosystems/locations of snakes for your Social Studies TEKS.
	V. Modifications -For older kids, encourage them to use the secondary and tertiary links on the guide pages to get more detailed info on their snakes & consider effects of climate change/natural disasters on survival and distribution. -For younger kids, have them draw a picture of the snake, and compare and contrast patterns of their snakes with their classmates'.

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Activity # 2 Population dynamics.		Time Required: 30 mins
Lesson Developers: Emma Wilson, Alicia Mein-Johnson, Jesse H. Jones Park and Nature Center --Inspired by Project Wild activity guide		Materials: - TPWD snakes alive FAQ for kids -One green and one red bandana for each person in the class.
Objectives: ❖ Understand the basic needs of Food, Water, and Shelter ❖ Learn how the availability of resources interacts with populations of animals		Grade Level - Science TEKS K-2 – 1-4 3-5 – 1-4, 7-10 6 – 1-4, 12 7 – 1-4, 10-14 8 – 1-4, 11
Procedures		
Time	Activities	
5 min	I. Motivation/Warm Up -Talk about basic needs for snakes, and make three lists. -Food sources: brainstorm a list of the prey of snakes, rats, birds, other snakes, eggs, etc. Water sources: rivers, rain, etc. Shelter sources: trees, burrows, tall grass, etc.	
15	II. Information - Set Up the Game -Divide the class into two equal groups: one wearing green bandannas and the other red. -Explain that the red bandannas are snakes, and the green bandannas are resources. -Resources line up single file, and all face one direction/away from the snakes. Snakes are in another single file line, about twenty feet away. (Lines are parallel). -All resources need to choose a resource to be. If they choose shelter, they put their hands over their head like a house. If they choose water they hold their fingers in a “w” over their mouth. If they choose food, they put both hands on their mouth. -Snakes also choose a resource to survive and make the same hand signals.	
10	III. Practice - Play the Game - Now the game starts. The snakes run to find ‘resources’ that match what they’re looking for. If a snake matches a resource, the resource switches bandannas to become a snake. -If any snakes cannot find their resource, they ‘die’, switch bandannas, and become resources. Play a few rounds and watch as the snakes all find resources, there are less to go around for the next generation. When the snakes ‘die’ there are more resources to go around.	
	IV. Application -Ask the students what they observed. In this model, all snakes that die become resources, and all resources are available to the snakes. Is this realistic? What other factors influence the population?	
	V. Modifications -For older students, introduce a hawk predator. Every snake they catch dies and becomes a resource. Introduce a hurricane, which eliminates all of the shelter. Be creative. Graph the results over time to show predator/prey relationships.	

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Activity # 3		Time Required: 30 mins
Lesson Developers: Emma Wilson, Alicia Mein-Johnson, Jesse H. Jones Park and Nature Center		Materials: - TPWD snakes alive FAQ for kids - Houston Audubon Society's snake guide - iNaturalist Houston Area Snake Guide
Objectives:		Grade Level - Science & Social Studies TEKS
<ul style="list-style-type: none"> ❖ Learn to identify venomous snakes in the Houston Area ❖ Know what to do if you find a venomous snake ❖ First aid for snake bites 		K-2 – 1-4 & 3, 4 3-5 – 1-4, 7-10 & 3, 4 6 – 1-4, 12 7 – 1-4, 10-14 8 – 1-4, 11
Procedures		
Time	Activities	
5 min	I. Motivation/Warm Up -Snakes can be dangerous but are also helpful members of the ecosystem. -You don't have to be afraid of snakes, but it helps to know more about them -Ask students about things they have heard about venomous snakes and first aid for snake bites (sucking out the poison, 'water moccasins', rattlesnakes, snake charmers, etc.)	
15	II. Information -Compare/contrast copperheads, cottonmouths, rattlesnakes, and coral snakes -Investigate harmless lookalikes (corn snakes, milk snakes, etc). -Dispel myths about poisonous snakes and snakebite care.	
10	III. Practice -Develop a snake safety plan and map with your class for your school grounds. Guide the class in developing principles such as inspecting rocks or wood piles for snakes before climbing or sitting on them, not touching unfamiliar snakes, and not provoking snakes with a stick or throwing things at it. Make sure the kids know the local emergency number.	
	IV. Application -Plan a nature hike or similar outdoor activity with the class to practice snake safety and awareness. Stick to trails and be respectful of wildlife. Watch for snakes and other animals, if you don't see any, point out what spots would make a nice habitat for them. Reflect on what you found afterward. - Use a GPS locator on your smartphone to mark high-probability snake locations, and create a Google Map or use Arc GIS to create a snake map.	