



HAPPY HALLOWEEN! We're celebrating our snake friends during Supper with the Snakes!

We hope that this adventure guide and our programming inspire you and your young scientist to learn more about snakes, explore our scientific collections, gain an appreciation of these incredible creatures, and make your own discoveries in nature.



Can't print at home? That's okay! **Use a notebook or some scratch paper** to follow along and make your observations. If you can print this booklet, **choose 1-sided printing** to make the most out of our activities!



Want to revisit some of your favorite programming after the day is over? **Visit naturemuseum.org/supper**



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SUPPER WITH THE **SNAKES**

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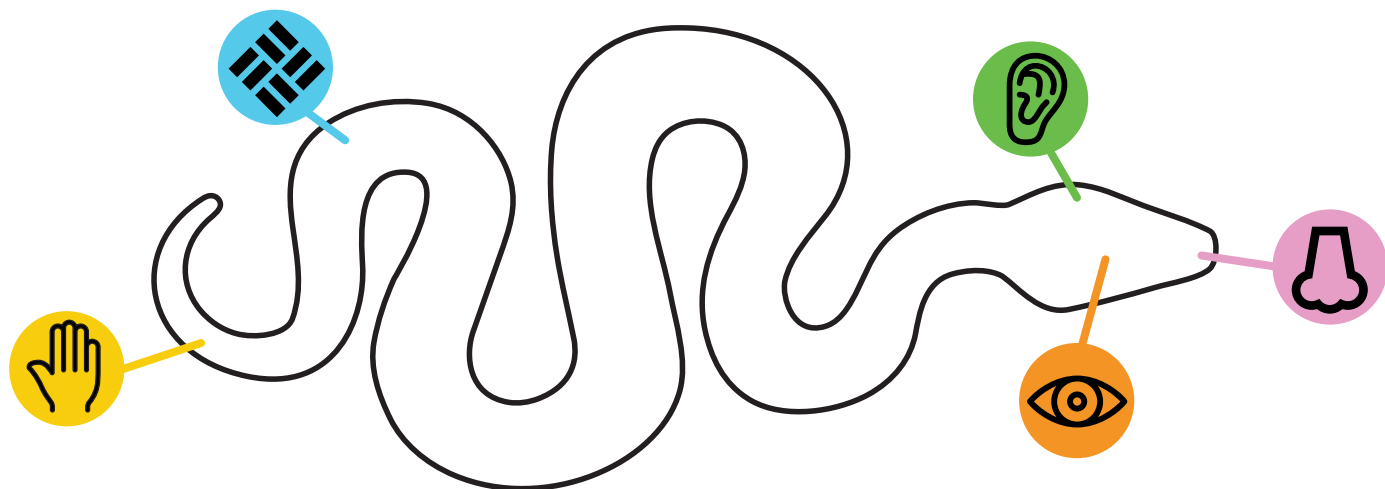
Sensational Snake Senses

Live Workshop • 6pm

Snakes rely on several different resources to survive: their senses, their camouflage, and even the Nature Museum!

Join us as we discover how snakes understand their surroundings by using common senses in surprising ways.

Keep this chart handy to help you make observations along the way!



Feeling

My questions:

My drawings/notes:

Color / Pattern

My questions:

My drawings/notes:

Hearing

My questions:

My drawings/notes:

Seeing

My questions:

My drawings/notes:

Smelling

My questions:

My drawings/notes:

Make Your Own Snake

Introduction



What you need:

- ☐ Paper towel or toilet paper tubes
- ☐ Scissors
- ☐ Ribbon or string
- ☐ Glue or tape
- ☐ Brushes
- ☐ Paint (kids' project paint or tempura)
- ☐ Markers or crayons
- ☐ Embellishments (optional)
 - sequins, small beads, glitter, pine cone scales, colored paper



Make Your Own Snake

Instructions



Step 1

Cut your paper tubes into roughly equal lengths, between 1.5 and 2.5 inches. These will create the body of your snake. The more you have, the longer your snake will be and the more it will undulate!



Step 2

Decorate your snake body. Snakes' coloration often helps them camouflage in their habitat, so they may be greens or browns, some have stripes while some are solid colors. You can make yours as realistic or as creative as you want!

- Color your pieces with paint, crayon, or marker
- Color the "belly" side of the tube a lighter color
- Create stripes or patterns
- Create texture by gluing on additional materials



Step 3

Connect your pieces together to create the snake body. Cut a long piece of ribbon or string (long enough to go through all the tube pieces with extra out one end to pull with) and attach these to the inside of the tube pieces. Position the ribbon/string along the bottom (belly) with tape or glue. Space the pieces together with a little room between each one. Leave extra ribbon coming out the front to pull the snake along.



Step 4

Create a face by adding eyes and a tongue and take your snake for a slither!

Meet the Snakes

Let's meet some of our Nature Museum star snakes! As you follow along with our videos, **check off the snakes you see and write down any other facts** you learn about these sensational snakes along with any questions that pop up!

☐ Fang

Hello world! Meet Fang the California king snake. Fang has albinism, which means these pearly pinks and yellow colors are unique and uncommon for California king snakes! In fact, most California king snakes have various brown scales. But not Fang! Always happy to say hello by sticking out her tongue, Fang is curious, smart, and will always find the best place for a snooze (under a heat lamp).



What do you notice about Fang?

What is something you learned about Fang or other snakes?

What do you wonder about Fang?

☐ Herbert

Say hello to Herbert, the hognose snake! Although he is nonvenomous, hognoses have a couple of different defense mechanisms to protect themselves! When they feel threatened, they will "play dead." They'll flip onto their backs, open their mouths, and stick out their tongues, hoping the predator will leave them alone! They also mimic rattlesnake behaviors to scare away predators, even though hognose snakes don't have rattles!



What do you notice about Herbert?

What is something you learned about Herbert or other snakes?

What do you wonder about Herbert?

Meet the Snakes

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☐ Hershey

This is Hershey! Since Hershey and other foxsnakes have such a striking scale pattern, they are sometimes confused with rattlesnakes. Foxsnakes are shy and blend in well in their forested habitats around the eastern United States. Although they are quiet as a mouse when hunting for food, in the wild, foxsnakes may shake their tails in dry leaves to scare off predators. It can even sound like a rattlesnake's rattle!

What do you notice about Hershey?

What is something you learned about Hershey or other snakes?

What do you wonder about Hershey?



☐ Toby

Say hi, Toby! Like Hershey, Toby is also a foxsnake. Why do you think foxsnakes are called foxsnakes? Here's a hint: it has to do with their smell! They can give off a stinky musk, reminiscent of a red fox, that isn't very appetizing to predators.

What do you notice about Toby?

What is something you learned about Toby or other snakes?

What do you wonder about Toby?



Meet the Snakes

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☐ Cartman

Cartman is a colorful corn snake. Often called the "farmer's friend" for taking care of pesky mice in farm fields, Cartman has slithered into our Nature Museum family and made himself at home. With distinct colors and a gentle attitude, corn snakes are common across the US.

What do you notice about Cartman?

What is something you learned about Cartman or other snakes?

What do you wonder about Cartman?



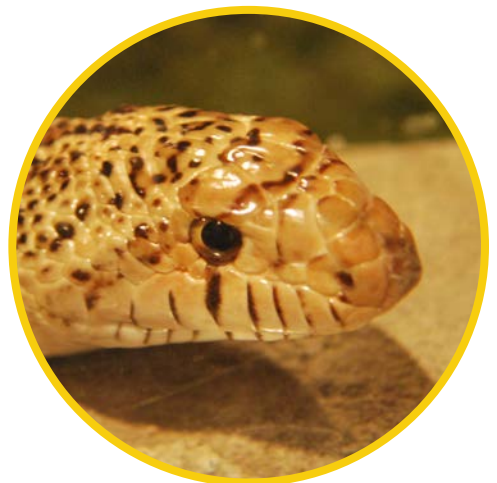
☐ Bandit

Bandit the bullsnake always knows when it's dinner time! Commonly found all over the Great Plains, bullsnakes are one of the largest North American snakes. As adults, they can measure up to eight feet long! Bandit is a big snake with an even bigger appetite!

What do you notice about Bandit?

What is something you learned about Bandit or other snakes?

What do you wonder about Bandit?



Meet the Snakes

Let's meet some of our Nature Museum star snakes! As you follow along with our videos, **check off the snakes you see and write down any other facts** you learn about these sensational snakes along with any questions that pop up!

☐ Gertie

Gartersnakes, like Gertie, are a common sight throughout Illinois, even in the city of Chicago! Gartersnakes are some of the first snakes to emerge in the spring and some of the last to hibernate in the fall. Their bodies are mostly dark with light stripes that run from their heads to their tails which helps them blend into their habitat. When she wants to, Gertie can hide very well under the foliage in her tank.

What do you notice about Gertie?

What is something you learned about Gertie or other snakes?

What do you wonder about Gertie?



☐ Blackstar

Although her name is inspired by her black coloring, Blackstar is actually a gray ratsnake. Despite their name, gray ratsnakes can be gray, black, or even a dark brown. You might not believe it, but gray ratsnakes are excellent climbers! In the wild, you might even spot one in a tree!

What do you notice about Blackstar?

What is something you learned about Blackstar or other snakes?

What do you wonder about Blackstar?



Smelling with the Snakes

Introduction

We've learned that snakes have many senses that they use to understand and move around their environment. Snakes use their eyes for seeing, their whole bodies for sense of touch, their jawbones to feel sounds, and...what about **smell**?



Take a close look at this snake. Does it have nostrils? Yes! But snakes primarily use their nostrils to breathe. In order to smell, they use a different part of their body.

Snakes use their tongue for smelling and tasting! If you look closely at a snake's tongue...does it look like ours?

A snake's tongue is forked, so it has two different pieces, left and right, and that's so they can smell in two different directions. We can hear if something is coming from our right side or our left side because we have ears on either side of our head. The snake's tongue works the same way, so they can tell which direction a scent is coming from and follow that scent.

They also use a special organ on the roof of their mouth, called a Jacobson's organ, in order to analyze that smell. They'll catch scent particles on their tongue, bring it back into their mouth, and bring it to their scent organ to help them determine what that smell is. This helps them understand their environment and hunt food!

What you need:

- ☐ Construction or scrap paper
- ☐ Scissors
- ☐ Essential oils, perfumes, or other scented oil
- ☐ A writing utensil (pen, pencil, crayon, or marker)

Smelling with the Snakes

Instructions



Step 1

Cut your scrap or construction paper into equal strips.



Step 2

Make a few different sets of scents materials (e.g., 3 strips of a lemon scent, 3 of eucalyptus, and 3 of cinnamon). Smell all of the sets to become familiar with their scents.



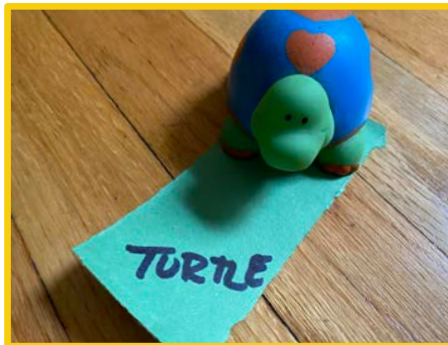
Step 3 (optional)

Label one strip in each set so everyone knows what it represents, this can either reflect the smell itself or symbolize a smell that a snake would be tracking in the wild.



Step 4

Grown-ups: Lay out different paths with your different scent sheets to create several sound trails.



Step 5 (optional)

Put a prize at the end of each scent trail! (e.g., a stuffed animal, a drawing of a mouse – whatever you'd like to find!)



Step 6

Kids: Pick one scent to follow on your scent hunt by matching the scents on the sheets of paper. You can record your path on paper to make a map!

Make and follow as many scent trails as you want!

Smelling with the Snakes

Guiding Questions

1. Which scents were easy to follow?
2. Which scents were hard to follow?
3. Can you remember your scent trail without the map?
4. Did any scents seem similar?
5. Which scents were different?
6. How do you think it would be to follow a sound trail? Or a texture trail?

Snake Camouflage

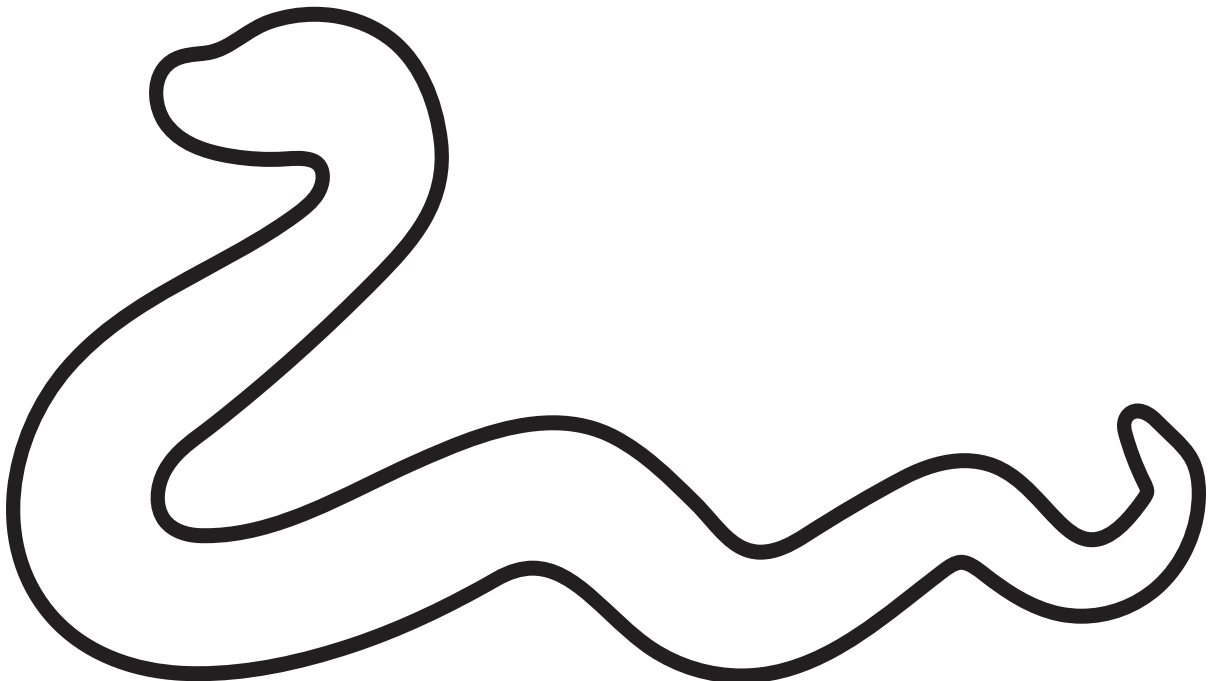
Introduction

Let's make a craft to use in a snake hide-and-seek game and learn about camouflage along the way!

What you need:

- ☐ Markers, colored pencils or crayons
 - ☐ Scissors
 - ☐ Paper snake cut outs (use our template or create your own!)
 - ☐ Smooth greensnake images
 - ☐ Tape (optional, for the hide-and-seek game)
-

Snake template:



Snake Camouflage Activity

Getting started:

Camouflage is a defensive tactic for animals to disguise their appearance or conceal themselves. Animals use camouflage to hide their location, identity, and movement. This can allow for predators to sneak up on their prey and for prey to hide from their predators.

Get started by thinking (or reviewing videos) of the snakes we meet in *Supper with the Snakes!* Then, observe the smooth greensnakes in the photos to the right.

What colors did you see? What patterns? Why might snakes have different colors and patterns?

Think about smooth greensnake! Smooth greensnake's green color is an example of camouflage. This snake's green color helps it hide in the green plants like flowers and grasses of the prairie!



Make your own snake:

Design your own camouflage snake! Print and cut out the snake template (use the back to color so you don't see the black outline) or draw and cut out your own snake. Use colors and patterns to make a snake that will camouflage well in the habitat or space you choose. For this project, you can be as realistic or as imaginative as you like! Think about natural habitats outdoors—like the grass or woodland—or indoor spaces at home like the couch or the carpet.

Play hide-and-seek:

Make as many snakes as you like! Then, hide them where they are well camouflaged. Just like in the smooth greensnake pictures hide your snake in plain sight. Let its camouflage work like a disguise, don't hide it under anything. Invite your family to look for them. Play a couple of rounds letting each person hide and seek for the snakes!

Was it easy or hard to find the snakes? Which camouflage worked best? Why do you think that was?

Making Bubble Snakes

Introduction

Think about the snakes we've met so far. What did they look like? What color were they? How big were they?

Although we often imagine all snakes as being about the same shape and size, they actually vary a lot in their appearance! Smooth greensnakes, like the ones Dr. Allison works with, are only about 3 inches long when they hatch and only grow to about 1–2 feet long as adults. Meanwhile, bull snakes are about 12 inches long when they hatch, and can measure up to 6 feet long as adults!

Let's explore snake size some more by making our own bubble snakes!



What you need:

- ☐ Clean, disposable drink bottles
- ☐ Scissors
- ☐ Dish soap
- ☐ Old socks (or cheesecloth)
- ☐ Shallow bowl filled with water
- ☐ Rubber bands or duct tape (if needed to hold sock in place)
- ☐ Food Coloring (optional)



Note: this activity is best if done outside, on a washable play mat, or on another surface that can get wet and soapy.

Making Bubble Snakes

Instructions

1. GROWN UPS: Carefully cut the bottom off of your bottle(s) and remove the cap from the mouth.
2. Stretch your sock or cheesecloth to fit snugly over the cut end of the bottle to make your bubble-maker. You may need to use rubber bands or duct tape to hold it securely if the sock is too loose on the bottle.
 - OPTIONAL: Use bottles of different sizes to make different bubble snake sizes.
3. Add dish soap to your bowl of water and use your hands to agitate the water and create bubbles.
4. Dip the cloth end of your bubble-maker into the soapy, bubbly water.
5. Carefully pull your bubble-maker out of the water and blow into the mouth of the bottle to form bubbles.
 - NOTE: You may need to try this a few times to make sure there are enough bubbles in the water and enough water on the cloth to create bubbles.
6. Practice blowing your bubble snakes and see how long you can make them!
7. OPTIONAL: Create bubble-makers of different sizes and see how your bubble snakes change shape based on the bubble-maker!
8. OPTIONAL: Add dots of food coloring to the cloth or the water to create snakes of different colors!



Pictured: Step 2
Cutting the bottom of the bottle



Pictured: Step 3
Fitting your sock/cloth over the cut end of the bottle



Pictured: Step 6
Blowing bubbles after dipping the cloth end into bubbly bowl of water.

Making Bubble Snakes

Guiding Questions

1. Which bubble-makers made the biggest snakes?
2. Which bubble-makers made the smallest snakes?
3. Did any of the bubble snakes remind you of any of the Nature Museum snakes? Why? Which ones?
4. Are there any other animals you could create using your bubble-maker?



Slither Like a Snake

Introduction

Have you ever seen a snake move? Even though the Nature Museum snakes are all different species, they all have something in common with the snakes in the pictures below. Can you guess what it is?

Trace your finger along the snakes below to feel what shapes they make.



Snakes move their body in an "S" shape to go forwards, backwards, and sideways. Moving in an "S" pattern helps snakes slide over the ground and even climb trees!

How do they move like this? Snakes have strong muscles, grippy belly scales (like the tread on the bottom of your shoe), and very flexible bodies! Their bodies are so **flexible** because they have a long **spine** with many **vertebrae** going from head to tail, and many **ribs** that run almost the whole length of their body. If you feel your own spine, you'll feel bumps and dips. The bumps are your vertebrae. If you put your hand on your side to feel your ribs, you can feel the bottom of your ribcage stops around your stomach. But snakes have ribs going almost all along their body!

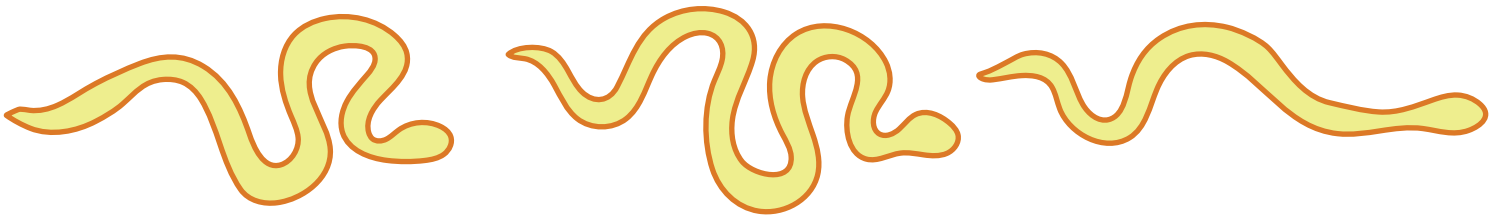
Remember the toilet paper tube snake you made earlier? It can move in an "S" pattern because all of the rings allow it to be very flexible, just like the ribs in a real snake. If your snake didn't have so many ribs, and was instead single long paper towel tube, would it be as flexible? Could you move it in an "S" pattern in the same way?

Slither Like a Snake

Learning to Slither

Let's practice slithering like a snake! Using your toilet paper tube snake, a string, or even your own body, see if you can mimic some of these snake slithers!

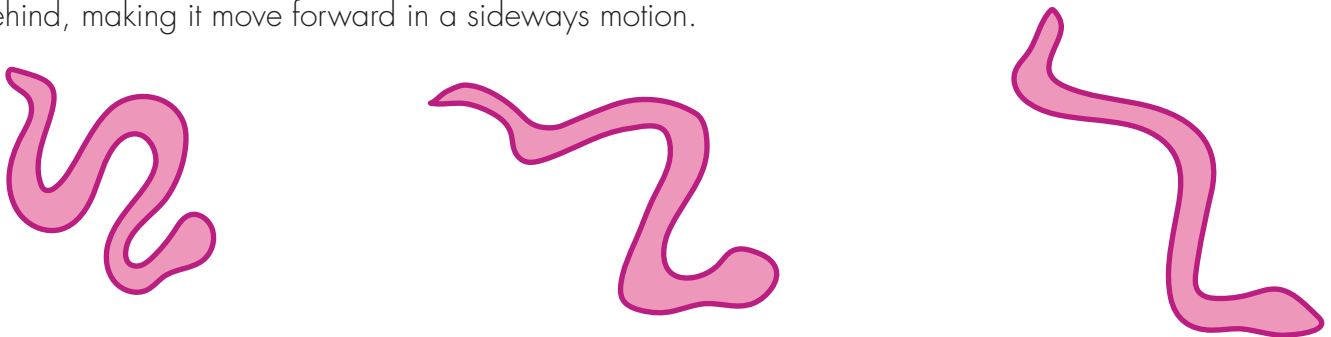
During **concertina** movement, the snake will pull its body up into bends and then straighten those bends out in order to move forward.



In **serpentine** movement, the snake pushes its body from side to side, moving it forward in a wavy motion.



Sidewinding involves the snake throwing its head forward, and the rest of the body following behind, making it move forward in a sideways motion.



Caterpillar movement is, like its name implies, similar to have a caterpillar moves. The snake's muscles contract to cause it to move forward in a rippling motion.



Slither along with our Nature Museum animal friends here:

naturemuseum.org/danceparty



**Thanks for joining us for
Supper with the Snakes!**

**Don't forget to share your experience
on social media!**

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