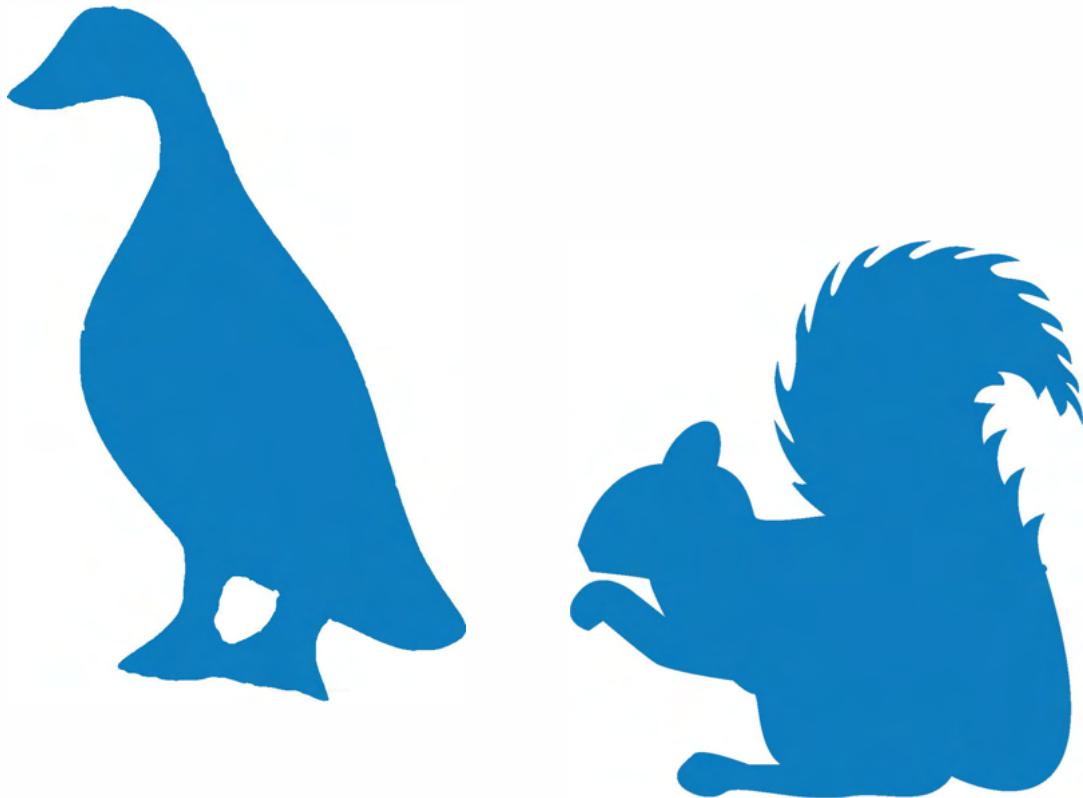


Animals in the City



*Wonder Guide & Activity Book
Summer 2020*



Fast Chicago Critter Facts

- Pigeons are a part of our everyday life, but there's nothing ordinary about them! For instance, did you know that pigeons and doves are actually related? They also vary a lot in their coloration. Although gray and black birds are common, there are also reddish-brown and even white variations.
- Canada geese are a familiar sight in Lincoln Park. They live on and near North Pond, and they eat the grass in the surrounding areas. Their diet almost entirely consists of plants and grains, although they may also eat insects, mollusks, and even small fish.
- Two duck species we see most often around the Nature Museum are mallards and wood ducks. Although they look similar in some ways, they're actually very different. Mallards nest on the ground close to water. Wood ducks, however, are perching ducks, and nest in trees thanks to their clawed webbed feet.
- We also encounter a lot of eastern gray squirrels in the city. It's really common to see squirrels munching on peanuts and seeds, but that's not the only thing they eat! They're omnivores, so they eat lots of different foods. Because the squirrels in Chicago have a lot more options available to them, it's not surprising to see them eating whatever they can get their hands on, like food scraps humans throw in the garbage.
- Of course, not all of our common animals are large enough to see at a glance. Some of our common animals need a little bit more exploration to see! Look closely at milkweed and you'll see monarch butterflies, milkweed bugs, and other cool insects. You can also encounter a lot of cool bugs in vegetable gardens! Black swallowtail caterpillars are a common sight in gardens because their host plants include carrots, dill, and fennel. The cabbage white caterpillar feeds on cabbage, broccoli, cauliflower, and mustard. The tomato hornworm feeds on tomatoes, potatoes, and eggplant.

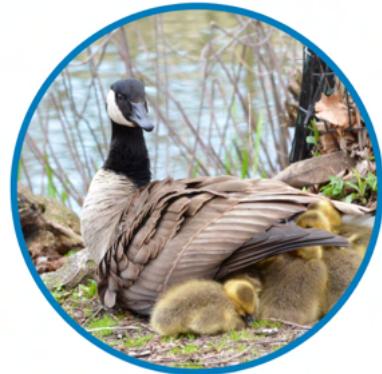


Image Investigator

Summary: Students observe an image and create an accompanying story to construct an explanation as to what might be going on in the image.

Grade Range (suggested): K-5

Materials:

- An image or video
- Image Investigator worksheet



ENGAGE

1. Tell students that today we will be looking at an image/video to try to understand what might be happening in it, and uncover the story that it is telling.

PREPARE TO EXPLORE

2. Introduce the image/video you will be looking at. Ask students to look closely at the image for a minute or two or watch the video once or twice.

EXPLORE

3. Once students have had a minute to look at the image or watch the video, ask them "What is going on here?" The goal of this activity is to guide your student's thinking and understanding as to what is going on in the image/video. Avoid inserting information--let students look closely and reason out their responses, rather than by discussing the facts.
4. Follow up the first question with, "What do you see that makes you say that?" to encourage students to back up their explanation with evidence from the image. This step can be repeated many times, having students build on their own ideas.
5. When a train of thought comes to an end, ask "What more can we find?" to pull out more evidence or to continue to build the explanation.

REFLECT and SHARE

6. Now that your students have thought about the image/video and what might be going on, have them write a story that explains it using the worksheet. They can use words and/or pictures to tell their story.
7. Have students share their story with someone!

Extensions and Variations:

- Use the same graphic organizer, but look at a different image or video. It could be related to any content!
- Take all of the stories your class creates and put them together in a book to share!

Image Investigator

Use words and/or pictures to tell a story about what you observed.



Investigador de imagen

Resumen: Los estudiantes observan una imagen y crean una historia que la acompaña para construir una explicación de lo que podría estar pasando en la imagen.

Rango de grado escolar (sugerido): K-5

Materiales:

- Una imagen o video
- Hoja de trabajo del Investigador de Imágenes



Enganar:

1. Diga a los estudiantes que hoy veremos una imagen / video para tratar de comprender lo que podría estar sucediendo en él y descubrir la historia que está contando.

Preparar para explorar:

2. Presente la imagen / video que estará viendo. Pida a los alumnos que observen detenidamente la imagen durante un minuto o dos o que vean el video una o dos veces.

Explorar:

3. Una vez que los estudiantes hayan tenido un minuto para mirar la imagen o ver el video, pregúntele "¿Qué está pasando aquí?" El objetivo de esta actividad es guiar el pensamiento y la comprensión de su estudiante sobre lo que está sucediendo en la imagen / video. Evite insertar información: permita que los alumnos observen detenidamente y razonen sus respuestas, en lugar de discutir los hechos.
4. Siga la primera pregunta con: "¿Qué ves que te hace decir eso?" para alentar a los estudiantes a respaldar su explicación con evidencia de la imagen. Este paso puede repetirse muchas veces, haciendo que los estudiantes desarrollen sus propias ideas.
5. Cuando un tren de pensamiento llega a su fin, pregunte "¿Qué más podemos encontrar?" para sacar más evidencia o continuar construyendo la explicación.

Reflexionar y Compartir:

6. Ahora que sus alumnos han pensado en la imagen / video y lo que podría estar pasando, pídale que escriban una historia que lo explique usando la hoja de trabajo. Pueden usar palabras y / o imágenes para contar su historia.
7. ¡Haga que los estudiantes compartan su historia con alguien!

Extensions and Variations:

- Utiliza el mismo organizador gráfico, pero mira una imagen o video diferente. ¡Podría estar relacionado con cualquier contenido!
- ¡Tome todas las historias que crea su clase y compártalas en un libro para compartir!

Investigador de imagen:

Use palabras y / o dibujos para contar una historia sobre lo que observó.

Drawing from the Museum's Collections



Draw/Label:

Use pictures and words to show what you notice about **ONE** of the specimens on this page.

Think:

What can you learn about this organism from observing the specimen?

What questions do you have about this specimen?

Dibuja de la Colección del Museo



Dibuja/Etiqueta:

Usa dibujos y palabras para mostrar lo que notas sobre **UN** espécimen en esta página.

Piensa:

¿Qué puedes aprender sobre este organismo al observar la muestra?

¿Cuáles preguntas tienes sobre este espécimen?

Animal Habitats

Description: Learners will use patterns to infer where animals live.

- 1) How do animals use their feet?

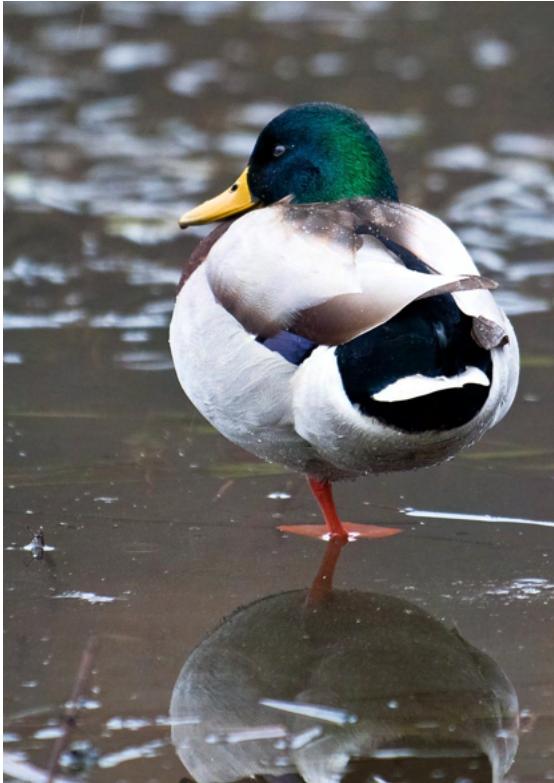


Image: Duck standing on one leg
Photo Credit: gcardinal /[wikicommons](#) (CC by 2.0)



Image: Duck standing
Photo Credit: barockschloss /[flickr](#) (CC by 2.0)



Image: Duck swimming
Photo Credit: Don Graham /[flickr](#) (CC by SA 2.0)

2. Where do ducks live? Do their feet look like ours? How are they different?



Image: Duck foot
Photo Credit: artistlike /[pixabay](#) (CC by SA 2.0)



Image: Human foot
Photo Credit: Peter Isotalo /[wikicommons](#) (CC by SA 4.0)

3. Animals that have feet like ducks, which are called webbed feet, live in water. What do you think webbed feet are good for? Look at the animal feet below. Which ones do you think live in water? Why do you think that?



Cooper's Hawk

Deer



Cricket Frog



Virginia Rail



Spiny Softshell Turtle



Grey Wolf



Beaver



Red-throated Loon

Key: Cricket Frog, Spiny Softshell Turtle, Beaver, Red-throated Loon

Hábitats de animales

Descripción: Los estudiantes usarán patrones para inferir dónde viven los animales

1. ¿Cómo usan los animales sus pies?

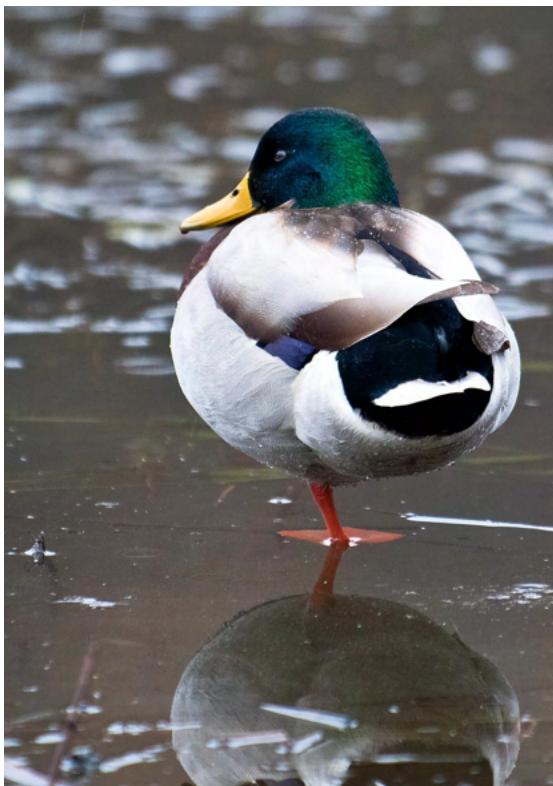


Imagen: Pato parado sobre una pierna
Crédito de la foto: gcardinal / [wikicommons \(CC by 2.0\)](#)



Imagen: Pato Parado
Crédito de la foto: barockschloss /[flickr \(CC by 2.0\)](#)



Imagen: Pato Nadando
Crédito de la foto: Don Graham /[flickr \(CC by SA 2.0\)](#)

1. ¿Dónde viven los patos? ¿Sus pies se parecen a los nuestros? ¿En qué se diferencian?



Imagen: Pie de pato
Crédito de la foto: artistlike /[pixabay \(CC by SA 2.0\)](#)



Imagen: Pie humano
Crédito de la foto: Peter Isotalo /[wikicommons \(CC by SA 4.0\)](#)

3. Los animales que tienen pies como los patos, que se llaman pies palmeados, viven en el agua. ¿Para qué crees que son buenos los pies palmeados? Mira los pies de los animales a continuación. ¿Cuáles crees que viven en el agua? ¿Por qué piensas eso?



Halcón Cooper

Venado



Rana Grillo del Noreste

Pajaro Rallidae de Virginia



Tortuga de Caparazón Blando Espinosa

Lobo Gris



Castor

Somorgujo de Garganta Roja

Clave: Rana Grillo, Tortuga de Caparazón Blando Espinosa, Castor, Somorgujo de Garganta Roja

Build your own bird nest!

Look closely at some examples of real bird nests, and then build your own using materials from around your home.

1. Take a close look at the different bird nests below. What do you notice? What do you wonder? What do you notice about the...
 - a. Shape?
 - b. Size?
 - c. Materials used?



2. How are all of the bird nests above similar or different from each other? Why do you think different birds build different nests?
3. Build your own nest! Let's start by brainstorming some materials that you have around your home that might help you build a bird nest. (Some suggestions: Pieces of yarn, tooth picks, paper, etc.)
4. After you have your materials, start planning your nest. How big will it be? What shape will it be?
5. While building your nest, engage your scientist in thinking about how birds build their nests. Where do they find their materials? What body parts do they use to build their nests? What will happen inside their nest?

iConstruye tu propio nido de pájaros!

Mira detenidamente algunos ejemplos de nidos de pájaros reales y luego construye los nidos. Utiliza materiales de tu hogar.

1. Mira los nidos de pájaros diferentes abajo. ¿Qué notas? Que te preguntas? Cuales son observaciones sobre...
 - a. ¿La forma?
 - b. ¿La talla?
 - c. ¿Las materiales?



2. ¿Cómo son los nidos similares o diferentes? ¿Por qué piensas los nidos de pájaros diferentes son diferentes?
3. Construya tu propio nido! Empieza pensar materiales tienes alrededor de tu casa que podrían ayudarlo a formar un nido de pájaros (ejemplos: trozos de hilo, palillos, papel, etc.)
4. Después de recolectar tus materiales, empieza a planificar tu nido. ¿Qué tan grande será? ¿Qué forma tendrá?
5. Mientras construyes tu nido, haga que tu científico piensa en como los aves construyen sus nidos. ¿Dónde encuentran sus materiales? ¿Cuáles partes del cuerpo usan para construir sus nidos? ¿Qué pasará dentro de tu nido?

Create a creature

Audience: Youth, Ages 6-11

During this activity, you and your scientist will create your own creature of the night based on adaptations of nocturnal animals. Nocturnal animals are animals that are active (finding food and shelter, competing for territories and places to raise young) during the night. Because they're active at night, they have special adaptations that allow them to get around easily in the dark. Owls have large eyes to help them see well in the dark. Bats, on the other hand, use echolocation. They send out high pitched sounds and use their incredible sense of hearing to listen for echoes. This helps the bats find prey and navigate. With these example adaptations in mind, you and your scientist will create your own unique creatures that have adapted to being active during the night!

MATERIALS

- Paper
- Scissors
- Glue/ tape
- Popsicle sticks
- Pipe cleaners
- Buttons
- Other recyclables/craft supplies

ACTIVITY

1. Ask your scientist if they can name some creatures that are active at night (owls, bats, rats, etc.) Ask your scientist if they know the word used to describe animals that are awake at night (nocturnal).
2. Ask your scientist if they can identify some of the things that help these animals get around during the night (eyes, etc.).
3. Using the above-mentioned materials and other craft pieces and recyclables, ask your scientist to imagine their own nocturnal animal. Ask them to create it by attaching the materials to their piece of paper using tape or glue. Since it's nocturnal, it will need a special adaptation to help it get around. Help your scientist brainstorm what these adaptations could be:
 - Maybe your animal can see well, so maybe it has large eyes
 - Maybe your animal has a good sense of smell, so maybe it has a special nose
 - Maybe your animal lives deep underwater, so maybe they can make themselves glow
4. Once you and your scientist have created your creatures of the night, talk about your animals and their adaptations.

GUIDING QUESTIONS

What's your animal called?

What's special about its body?

Where does it live?

What does it do at night?

What does it do during the day?

What does it eat?

What helps it get around during the night?

ADDITIONAL VOCABULARY

- **Adaptations:** specific behavioral and/or physical changes to help an animal be successful and survive.
- **Biodiversity:** a word used to describe the extensive variety of life to be found on earth.
- **Community:** an ecological grouping of plants and animals that live together in a balanced situation in any particular area.
- **Crepuscular:** species that are most active at dawn and dusk.
- **Diurnal:** species that are active during the day.
- **Nocturnal:** species that are active at night.

Hungry squirrel

Play a game to learn how squirrels find and save food to survive in the cold winter woodland.

Materials:

- wooden acorns or pompoms of different colors (other items work too! Use what you have--different pasta shapes, etc.)
- bowls/cups to “cache” food in

Before You Play:

- Scatter “acorns” (or whatever object you are using as your acorns) around the room or throughout your yard.
- Ask, “How do you think squirrels find food throughout the winter?” Have a conversation about their answer. What makes them say that?
- Tell them that today, we are going to play a game to model how squirrels find food so they can survive the winter.

How to Play:

1. Assign each squirrel (player) one of the bowls as their spot to cache (or save) their food for the winter. Have them choose a location to leave their bowl--their homebase.
2. Explain that it is the fall, and there are a lot of acorns falling from the trees. Acorns are one of the things that squirrels eat, so they are going to go out to collect some acorns one at a time--squirrels can only carry so much!
3. Set a timer for 2 minutes and have squirrels collect as many acorns as they can and bring them to their cache. Remember, squirrels can only collect one acorn at a time!
4. When the timer goes off, go back to your cache and see how many acorns you have in your cache. If you can eat 5 acorns, you’ve survived the fall. It took a lot of energy to collect those acorns. If, after your fall feast, you still have 5 acorns in your cache, you have enough to survive the winter.

Extension:

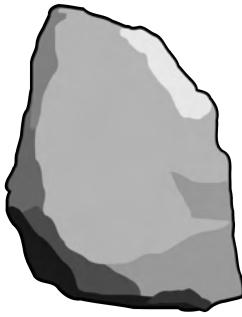
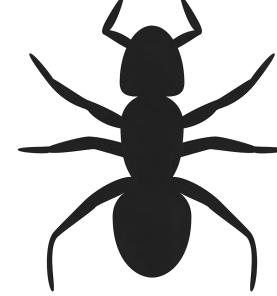
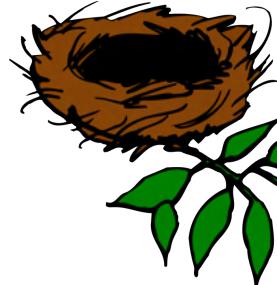
- Introduce predator prey relationships by having a coyote tagger who is trying to catch squirrels to eat!

Bilingual Nature Scavenger Hunt!

¡Búsqueda del Tesoro Bilingüe en la Naturaleza!

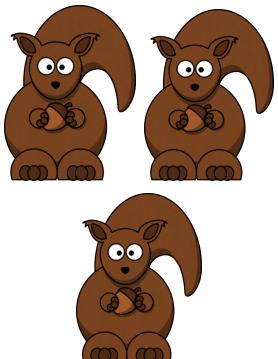
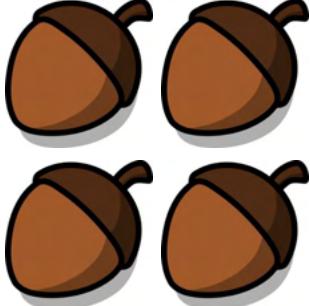
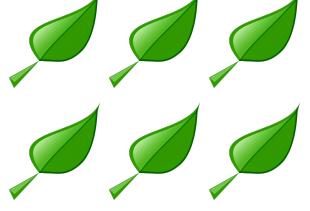
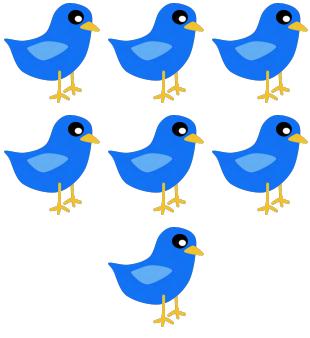
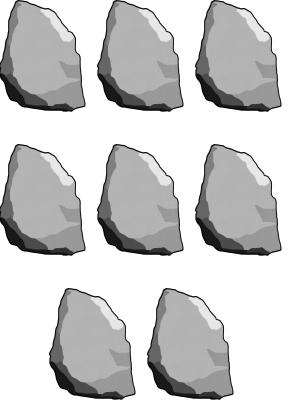
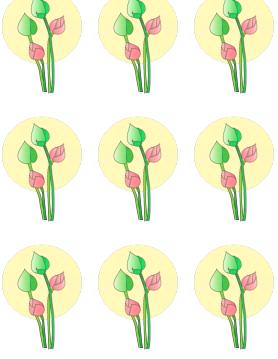
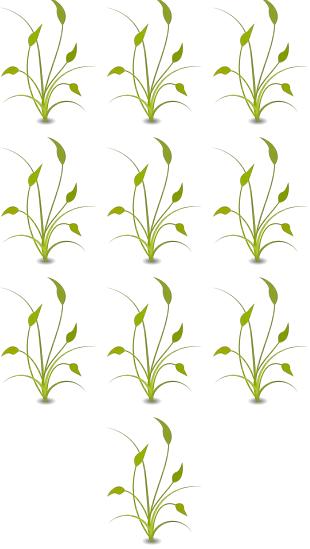
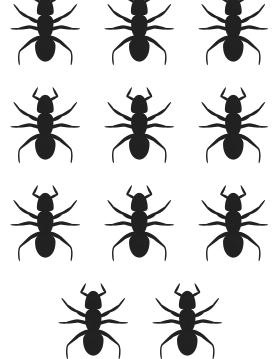
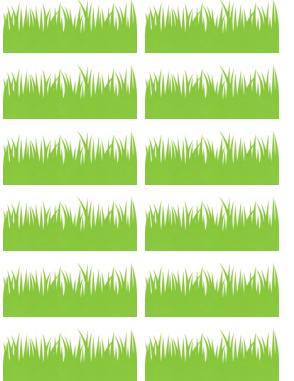
It's time for a nature scavenger hunt! Go outside to see which of these objects you can find--and learn nature bilingually while you're at it. As you find the objects, practice saying the words aloud in English and Spanish.

¡Es hora de una búsqueda del tesoro en la naturaleza! Sale afuera a ver lo que puedes encontrar y aprende la naturaleza bilingüe mientras lo haces. Cuando encuentras las cosas, practica decir las palabras en inglés y español.

			
Rock Roca	Tree Árbol	Flower Flor	Bud Brote
			
Wind Viento	Squirrel Ardilla	Bird Pájaro	Ant Hormiga
			
Cloud Nube	Grass Pasto	Roots Raíces	Stick Palo
			
Stump Tocón	Sun Sol	Leaf Hoja	Nest Nido

On this side, practice learning numbers in English and Spanish through nature! Again, practice saying the words aloud in English and Spanish.

¡De este lado, practica aprender los números en inglés y español a través de la naturaleza! Otra vez, practica decir las palabras en inglés y español.

			
<p>Find one tree Encuentra un árbol</p>	<p>Find two nidos Encuentra dos nidos</p>	<p>Find three squirrels Encuentra tres ardillas</p>	<p>Find four acorns Encuentra cuatro bellotas</p>
			
<p>Find five clouds Encuentra cinco nubes</p>	<p>Find six leaves Encuentra seis hojas</p>	<p>Find seven birds Encuentra siete pájaros</p>	<p>Find eight rocks Encuentra ocho rocas</p>
			
<p>Find nine buds Encuentra nueve brotes</p>	<p>Find ten plants Encuentra diez plantas</p>	<p>Find eleven ants (but don't touch!) Encuentra once hormigas (ipero no toques!)</p>	<p>Find twelve blades of grass Encuentra doce briznas de pasto</p>

Making a Sound Map



Materials:

- Paper or note card with an “X”
- Pencil
- Attach the paper to a piece of cardboard with a rubber band to make a little DIY clipboard!

Getting Ready:

Get your supplies ready. Let your student know that you'll be making a special kind of map—a map of sounds. Scientists use their senses to learn about the world around so consider reviewing the five senses together!

Let's Start:

Once in an appropriate spot outside. On your map, the "X" indicates your location. On your map use pictures, words, and/or symbols to indicate interesting sounds around you.

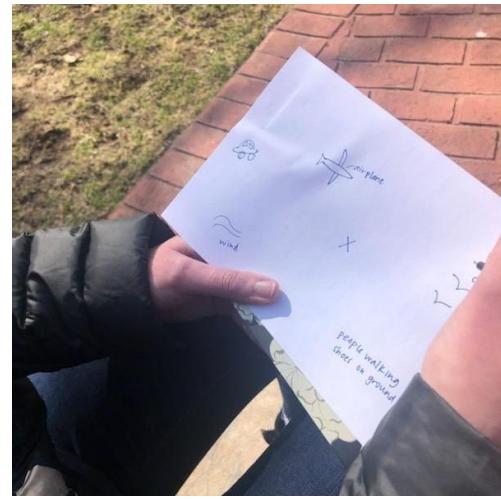
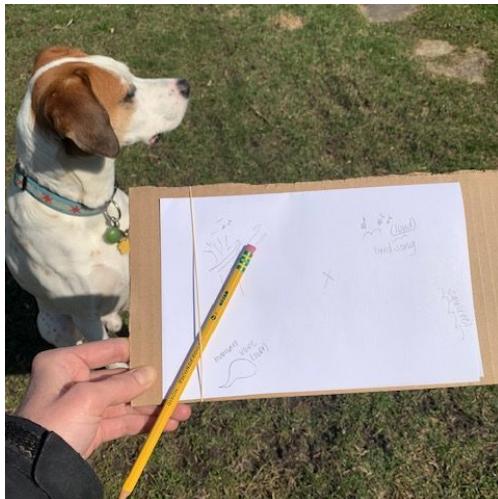
For example, a few wavy lines could represent a gust of wind, or a musical note could indicate a singing bird.

Note: This could include the other senses too! Students could add smells or sights to a “sensory” map, if you like.

Encourage your student to close their eyes while listening for sounds. To help them increase their hearing ability, ask them to make “deer” ears by cupping their hands behind the ears. This hand position will create a greater surface area to capture sounds.

Share:

Afterward, share your maps with each other. Students could color and add details to their map!



What do animals need to live?

Description: Investigate what geese need to survive in Chicago.

Grade Range (suggested): pre K-2

Procedure:

1. Look at the photo of the animal below. Have you ever seen this animal before? What do you already know about this animal?



CC0 by Thomas B. from Pixabay

Geese only live in places where they can get what they need to live.

2. Today you are going to explore some of the things that geese need to live. Look at the pictures below. What do you think that geese need to live?



Image by Reago & McClaren from Flickr (CC BY 2.0)



CC0 by Helga Kattinger from Pixabay

Did you guess food and water?

3. Geese can visit lots of places but the places they live need to have food and water. Look at the photos below. Circle or point to the places where geese can live.



Can geese find food here?
Can geese find water here?
Can geese live here?

[CC0 by ArtTower from Pixabay](#)



Can geese find food here?
Can geese find water here?
Can geese live here?

[CC0 by David Mark from Pixabay](#)



Can geese find food here?
Can geese find water here?
Can geese live here?

[CC0 by User 12019 from Pixabay](#)

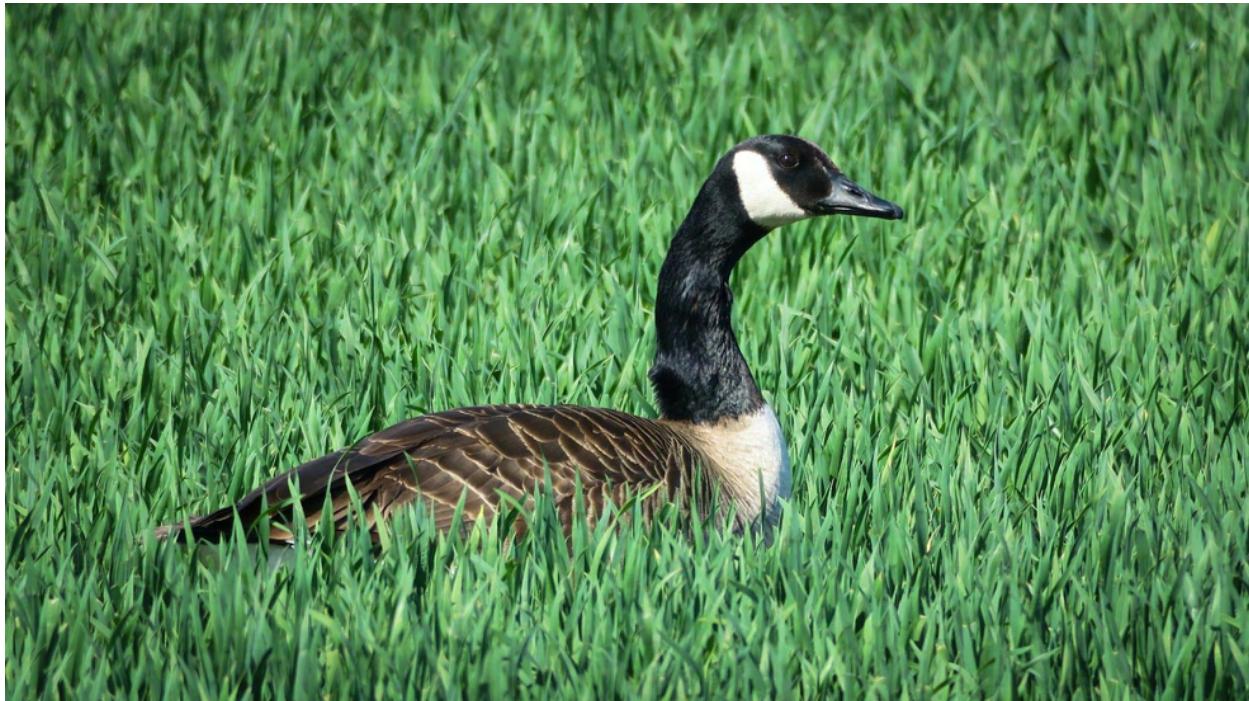
4. Do you need some of the same things as geese to live? What are some things that you need that are different from geese? What other questions do you have about geese? Try asking a grown up or looking online to find the answers.

¿Qué necesitan los animales para vivir?

Descripción: Investigue qué gansos necesitan para sobrevivir en Chicago.

Rango de grado (sugerido) pre K-2

1. Mira la foto del animal a continuación. ¿Alguna vez has visto este animal antes? ¿Qué sabes sobre este animal?



CC0 by Thomas B. from Pixabay

Los gusanos solo viven en lugares donde pueden obtener lo que necesitan para vivir.

2. Hoy vas a explorar algunas de las cosas que los gansos necesitan para vivir. Mira a las imágenes a continuación. ¿Qué crees que los gansos necesitan para vivir?



Image by Reago & McClaren from Flickr (CC BY 2.0)



CC0 by Helga Kattinger from Pixabay

¿Adivinaste comida y agua?

3. Los gansos pueden visitar muchos lugares, pero los lugares donde viven necesitan comida y agua. Mira las fotos a continuación. Haz un círculo o señala los lugares donde pueden vivir los gansos.



¿Pueden los gansos encontrar comida aquí?
¿Pueden los gansos encontrar agua aquí?
¿Pueden los gansos vivir aquí?

[CC0 by ArtTower from Pixabay](#)



¿Pueden los gansos encontrar comida aquí?
¿Pueden los gansos encontrar agua aquí?
¿Pueden los gansos vivir aquí?

[CC0 by David Mark from Pixabay](#)



¿Pueden los gansos encontrar comida aquí?
¿Pueden los gansos encontrar agua aquí?
¿Pueden los gansos vivir aquí?

[CC0 by User 12019 from Pixabay](#)

4. ¿Necesitas algunas de las mismas cosas que los gansos para vivir? ¿Cuáles son algunas cosas que necesitas que son diferentes de los gansos? ¿Qué otras preguntas tienes sobre los gansos? Intenta preguntar a un adulto o busca en línea para encontrar las respuestas.

Create Your Own Ethogram

An **ethogram** is a record of the common behaviors of a species, often in pictorial form. Ethograms can be recorded over any period of time, and can be informative when studying animal behavior. The goal of an ethogram is to collect data on what behaviors an animal engages in most, and how often they perform those behaviors. Pick one animal to watch (your pet, something out the window, a bug crawling in the house!) In the table below, list one possible behavior your animal could engage in (eating, drinking, resting, running, etc.) on each line. The last line has already been labeled “other” in case there is a behavior you observe that you had not thought of yet!

An ethogram works best when one person will be the timer and recorder while the other person is the observer. The observer **never** looks away from the animal. The timer and recorder will count 15 seconds and tell the observer to ‘LOOK’. The observer will say what the animal is doing. The timer then records the observation in the table below. Put a check mark by the one behavior your animal is doing at that time. It is important that the observer **always** watches the animal.

Behavior	1 st Look	2 nd Look	3 rd Look	4 th Look	5 th Look	6 th Look
Other						

What did you learn about your animal’s behavior?

What behaviors did it do most often? What behaviors did it do least often?

Why do you think your animal engages in these behaviors so often?

Crea tu propio Etograma

Un **etograma** es un registro de los comportamientos comunes de una especie de animal, a menudo en una forma pictórica. Los etogramas pueden registrarse durante cualquier periodo de tiempo y pueden ser informativos al estudiar el comportamiento de los animales. El objetivo de un etograma es recopilar datos sobre los comportamientos en los que más se involucra un animal y con qué frecuencia realizan esos comportamientos. Elija un animal para observar (su mascota, algo por la ventana, un insecto en la casa). En la tabla, enumera un posible comportamiento que su animal podría tener (comer, beber, descansar, correr, etc.) en cada línea. ¡La última línea ya ha sido etiquetada como “otra” en caso de que haya un comportamiento que observe que aun no había pensado!

Un etograma funciona mejor cuando una persona será el temporizador y el registrador, mientras que la otra persona será el observador. El observador **nunca** aparta la vista del animal. El temporizador y el registrador contará 15 segundos y le indicará al observador que “MIRE”. El observador dirá lo que está haciendo el animal. El temporizador registra la observación en la tabla. Marques el comportamiento que tu animal está haciendo en ese momento. Es importante que el observador **siempre** observe al animal.

Comportamiento	1 ^{era} Mirada	2 ^{da} Mirada	3 ^{era} Mirada	4 ^{ta} Mirada	5 ^{ta} Mirada	6 ^{ta} Mirada
Otro						

¿Qué aprendiste sobre el comportamiento de tu animal?

¿Qué comportamientos hizo con más frecuencia? ¿Qué comportamientos hizo con menos frecuencia?

¿Por qué crees que tu animal se involucra en estos comportamientos con tanta frecuencia?

Additional Resources

Want to keep learning? Check out these resources!

Explore some more animals in both English and Spanish. Check out the bilingual book, “My Spanish Book of Animals.”

Check it out in English and Spanish:

<https://archive.org/details/myspanishbookofa00fran>

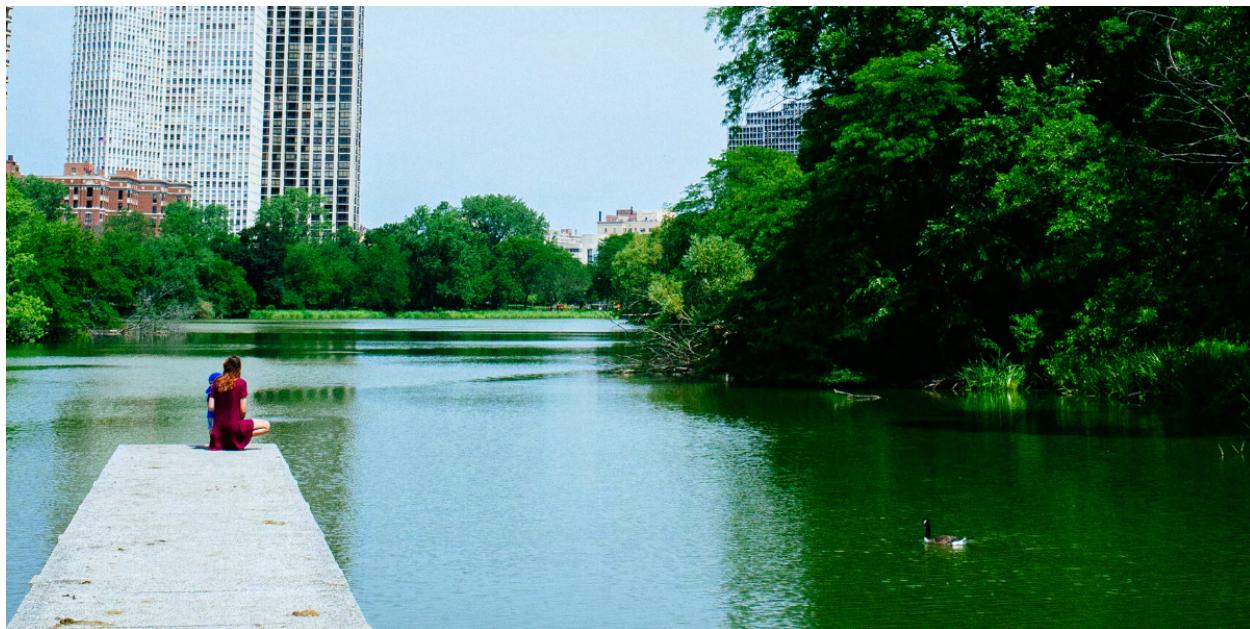
Heading to the library? Check out some of our favorite Story Time books:

- “Bee” by Britta Teckentrup
- “They All Saw a Cat” by Brendan Wenzel
- “Squirrels Leap, Squirrels Sleep” by April Sayre

Check out our YouTube channel for videos of local animals, butterfly releases in our *Judy Istock Butterfly Haven*, plus animal-focused Story Times:

<https://www.youtube.com/peggynnm>

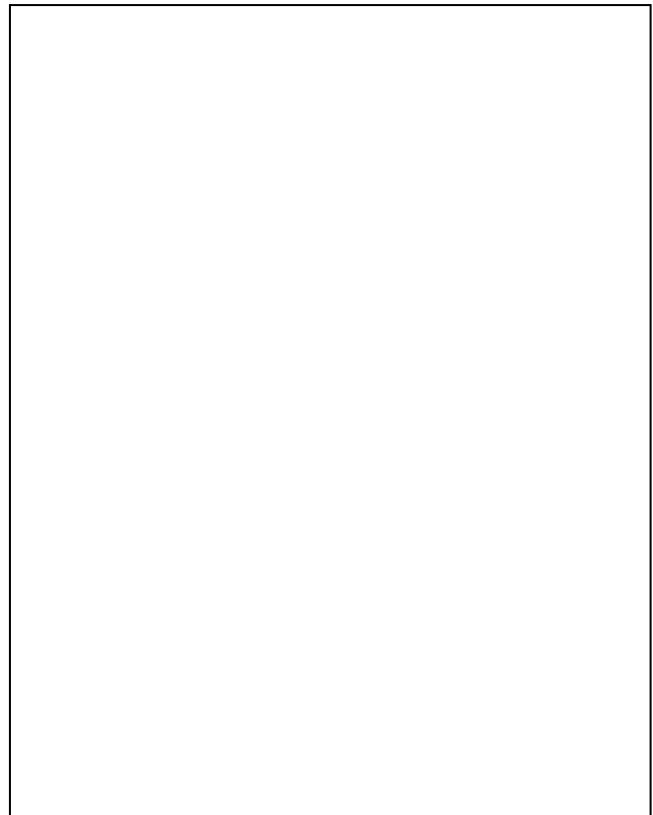
Explore other activities, crafts, and more: naturemuseum.org/stem



Neighborhood Animals

Animal name:

Description (color, size, etc):



Diet:

Habitat (where did you see it):

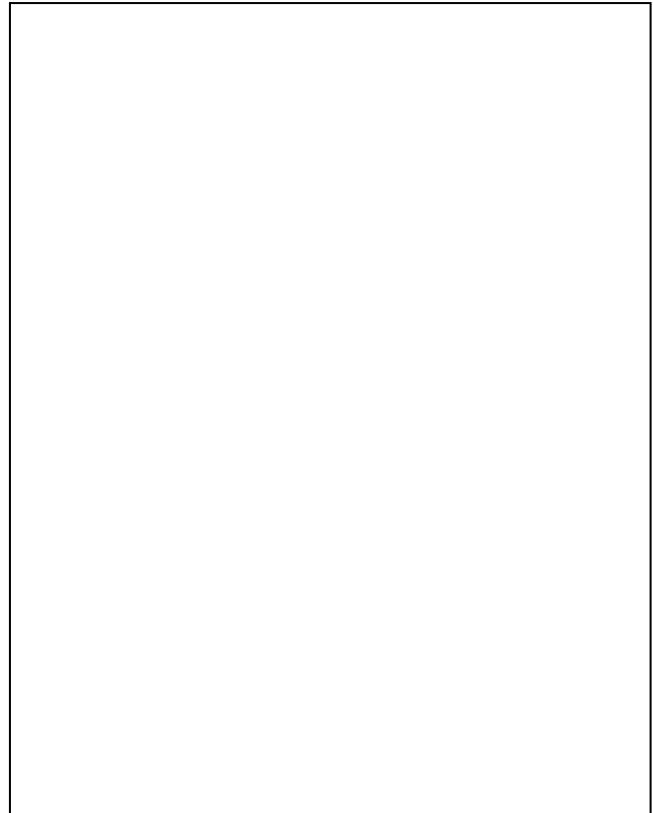
Behaviors (what was it doing?):

Drawing and research done by: _____

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Description (color, size, etc):



Diet:

Habitat (where did you see it):

Behaviors (what was it doing?):

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My Observations

I'm observing _____.

I notice:

(use words and drawings to describe what you're observing)

I wonder:

(write all the questions you have about what you're observing)

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Story Time Graphic Organizer

Story Time Book Title: _____

Use words and pictures to share about
a main idea in the story you read.

Describe some adventure or exploration that happened.

How is nature involved in the story?

After reading the story, what do you wonder?

As you were reading the story, how did you feel?

Does the story give you any ideas in your own life?

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