



VIRTUALLY WILD! COMMUNITIES

ACTIVITY GUIDE FOR
HOUSTON AUDUBON
RAPTOR CENTER



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

Themes from Houston Audubon Raptor and Education Center:

- Owls
 - Types of owls in Houston and Scientific names
 - Diet/Pellet dissection
 - Life-cycle
- Animals
 - Houston's Food chain
 - Biodiversity
 - Adaptations
- Birdwatching
 - Houston is home to owls, hawks, vultures, and eagles. Get your class outside and see what they can find.
- Ecosystems
 - Fragmentation
 - Bioaccumulation and/or litter hazards to owls and other birds.

Resources:

- Owl Pellet kits
 - [YouTube video for older kids](#)
 - [YouTube video for younger kids](#)
- [Houston Audubon Society Raptor Center Page](#)
- [HERE in Houston Website](#)

Activity Guide for Virtually Wild! Communities

Outrageous Owls

Activity # 1: Owl Pellet Dissection

Time Required: 30 mins

Lesson Developers:

Emma Wilson, Alicia Mein-Johnson, Houston Audubon Society

Materials:

- Owl pellets or video
- tweezers
- [bone guide](#)
- [TPWD guide to owls](#)

Objectives:

- ❖ Describe an owl pellet and understand how it's made
- ❖ Identify bones in an owl pellet
- ❖ Analyze and determine what the owl ate and recreate the ecosystem food web.

Grade Level - Science TEKS

- K-2** – 1-4
- 3-5** – 1-4, 7, 8, 9
- 6** – 1-4, 12
- 7** – 1-4, 8
- 8** – 1-4, 11

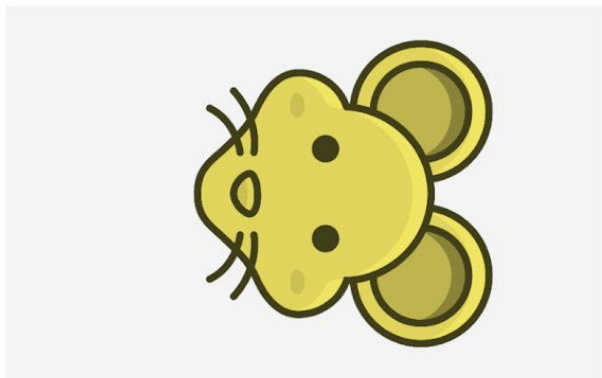
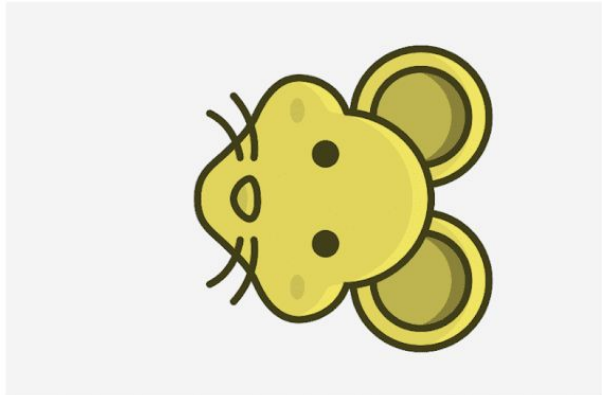
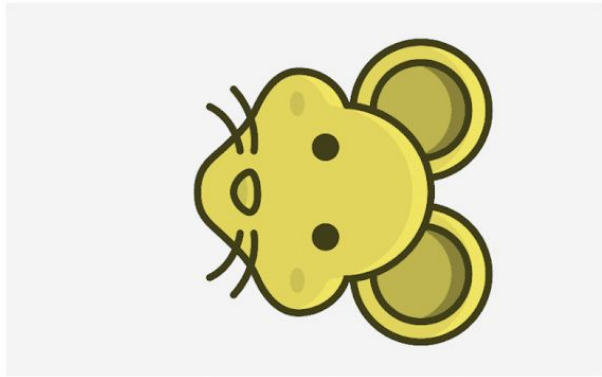
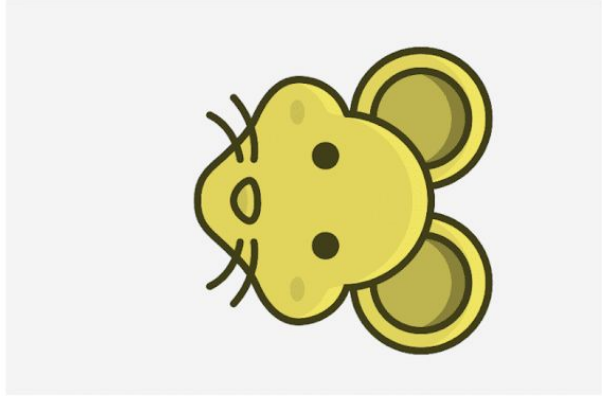
Procedures

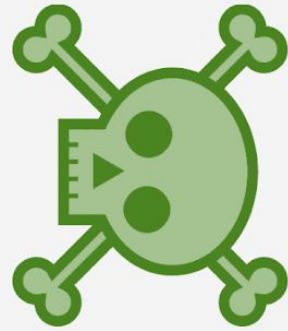
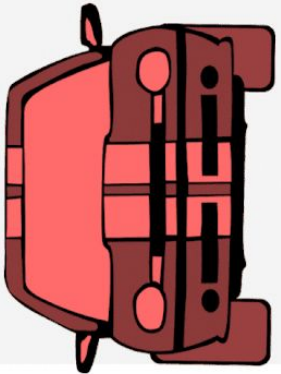
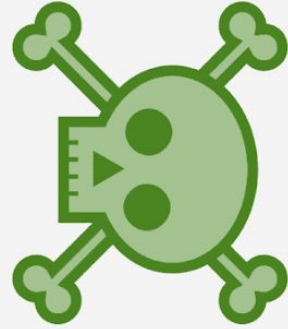
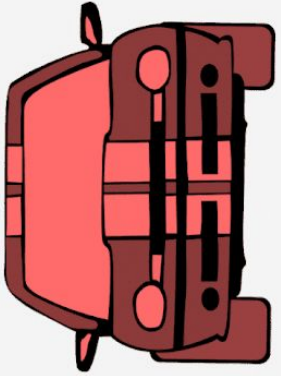
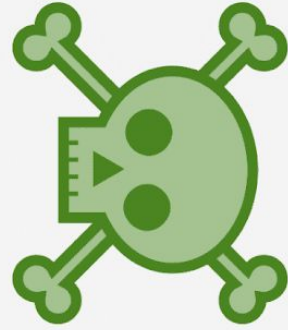
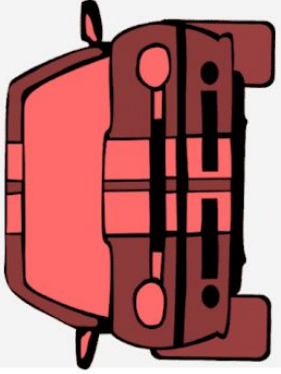
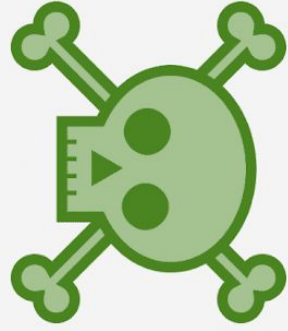
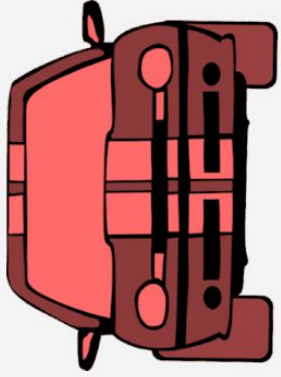
Time	Activities
5 min	<p>I. Motivation/Warm Up</p> <ul style="list-style-type: none"> -Give/ send students owl pellets or queue YouTube video -Show students an example owl pellet and introduce the theme. Ask students to hypothesize what their owl will have eaten.
15	<p>II. Information</p> <ul style="list-style-type: none"> - Describe owl pellets. -Talk about dissection techniques and what students might find in their pellets. Remind younger students they have to be <i>careful</i> not to break the bones. You may use wooden toothpicks with younger audiences that do not need sharp objects. You may also soak them in hydrogen peroxide to soften/make dissection easier. -Why we care: Food studies can tell us about the health and diet of an owl, and can be useful to determine types of prey in the area that are hard to trap using traditional methods.
10	<p>III. Practice</p> <ul style="list-style-type: none"> -Moisten the owl pellet if desired with hydrogen peroxide, then use tweezers or toothpicks to gently tease apart the pellet -Pull the bones from the pellet carefully and use the guide to determine what bones are present -Arrange bones into skeletons of their respective animals.
	<p>IV. Application</p> <ul style="list-style-type: none"> -Discuss the digestive systems of owls and other animals. What other animals swallow prey whole? eat bones? etc. How do they differ from us? Why is chewing food important for us? -Encourage students to look at photos of Houston's owls and of the prey found in their pellets. Talk about prey vs predators and the differences in their behavior and habitats. - Recreate the food web of the ecosystem, based upon class data. - Weigh the bones, and recreate a biomass pyramid.
	<p>V. Modifications</p> <ul style="list-style-type: none"> -This lesson can be more biology-based, focusing on the digestive system, or ecology-based, focusing on the food chain and interrelationships between animals. -Lead older students to do their own pellet dissection along with you, or show-and-tell.

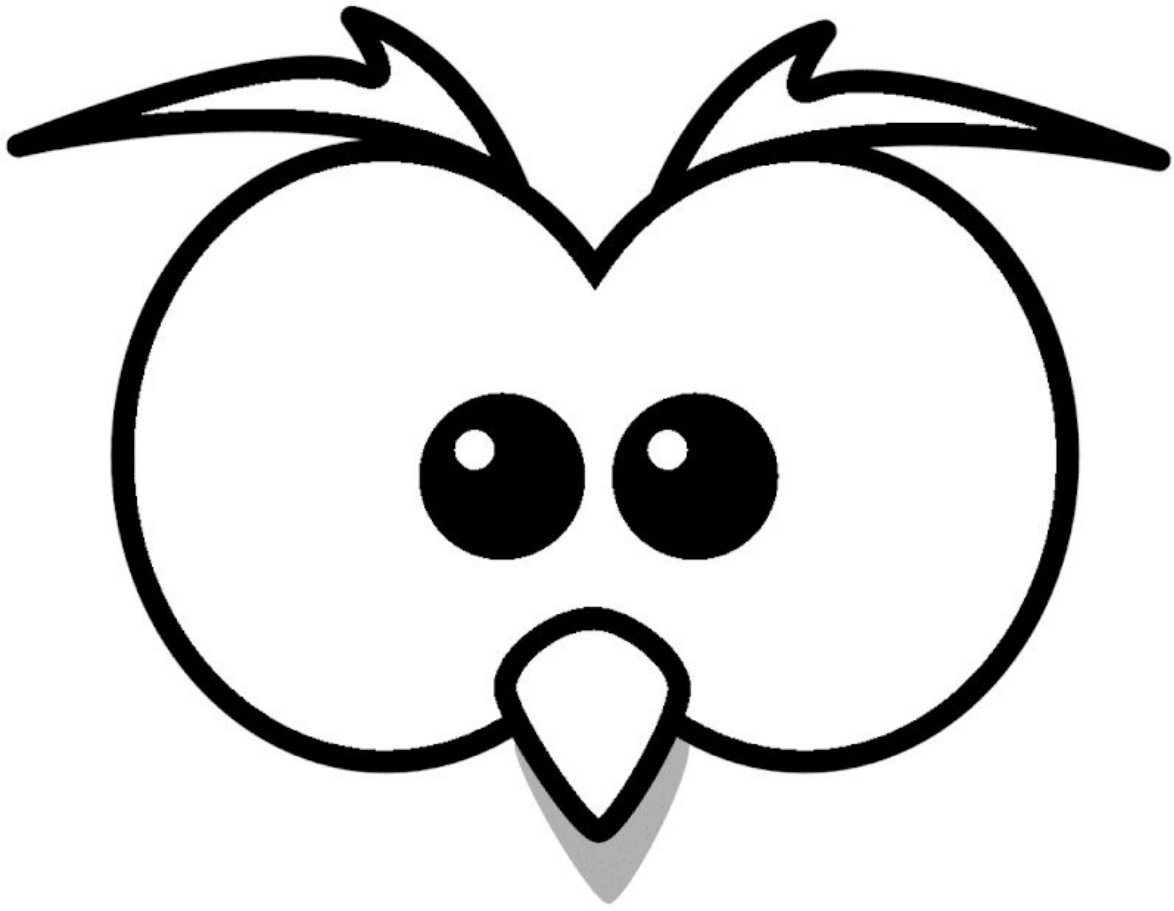
Activity Guide for Virtually Wild: Communities

Outrageous Owls

Activity # 2: Is the Deck Stacked Against Nature?		Time Required: 30 mins
Lesson Developers: Emma Wilson, Alicia Mein-Johnson, Houston Audubon Society		Materials: -16 index cards, labeled: 8 prey, 4 poison hazard and 4 car hazard OR print the 16 Stacked Deck cards -Plastic bags and hanging scale - Littering Link - Land Bridge Link
Objective(s): <ul style="list-style-type: none"> ❖ Demonstrate threats to owls and other wildlife from litter and cars ❖ Define bioaccumulation ❖ Lead a classroom or community cleanup 		Grade Level - TEKS K-2 – 1-4, 7 3-5 – 1-4, 7, 8 6 – 1-4, 12 7 – 1-4, 8, 13 8 – 1-4, 11
Procedures		
Time	Activities	
5 min	I. Motivation/Warm Up - Introduce the theme. Tell 3-6 student volunteers they are now owls. <ol style="list-style-type: none"> a. Use the Stacked Deck cards, or take 8 index cards labeled “prey” and place them face-down. Let students pick a card. Did each owl get their prey? (Yes) b. Add 4 cards labeled “poison” to the deck. Shuffle, and let the students pick again. Did each owl still get their prey? c. Add 4 cards labeled “car” to the deck. Shuffle, and let students pick again. Did each owl still get their prey? - Extension: Graph the number of predators per day. Discuss other hazards. Using a map, predict where owls may be safer, and may be more in danger, in your neighborhood/region.	
15	II. Information -Define terms: Litter, fragmentation, bioaccumulation, and wildlife corridor. -Explain how owls displaced by human development can often remain in urban settings where prey generalists thrive, but this increases the chance that they will be hit by a car or eat prey poisoned by pesticides and other chemicals (which bioaccumulates in the owl). -Why we care: Human development contributes to habitat loss and increased pesticide use, and simple acts like not littering, increasing green space and not using rat poisons can help solve the problem.	
10	III. Practice -Let students brainstorm solutions to the threats facing owls and other wildlife. For example, clean up litter, use traps instead of poison to control pests, follow chemical directions carefully, etc.	
	IV. Application -Clean up litter around students’ school or homes, then let students weigh the amount of litter collected. Give recognition to the team/students who collected the most.	







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Outrageous Owls

Activity # 3: Owl adaptations

Time Required: 30 mins

Lesson Developers:

Emma Wilson, Alicia Mein-Johnson, Houston Audubon Society

Materials:

- Paper plates, yarn, hole punch, scissors
- paper towel tubes
- chopsticks
- markers or crayons to decorate
- [Information link](#)
- [Build a Birdhouse link](#)

Objectives:

- ❖ Learn about owls’ sensory structures
- ❖ Demonstrate how these structures function
- ❖ Reflect on how owls’ adaptations enable them to survive in their environment

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Procedures

Time	Activities
5 min	II. Motivation/Warm Up -Ask students what they know about owls’ adaptations, and talk about familiar structures they use to see, hear, vocalize, hunt and grab things, and travel around.
15	II. Information -Discuss the unique adaptations that owls have, such as 360-degree rotation of the neck to accommodate stationary eyeballs, asymmetrical ears and facial disk to enhance hearing, sharp talons and beak, and feathers that enable flight and insulate from weather extremes.
10	III. Practice -Owl eyes: cut a paper plate in half, cut eye holes, and attach a length of yarn to make and decorate an owl mask with a facial disk. You can also use two paper towel tubes to mimic their stationary eyes that don’t have peripheral vision. -Owl ears: Have students close their eyes and cup their ears in different directions to hear like an owl; cut the bottom off of a plastic cup, and use it to hear better. -Owl talons: Have students grab gummy worms with chopstick or salad tongs as ‘talons’. -Owl wings: Accordion-fold half of a paper plate into a fan and observe how the ‘wing’ is effective at moving air around.
	IV. Application -Discuss the things owls need in their habitat and observe what is available to wildlife near your community. Students may build an owl box (or other bird box) using this guide from TPWD.
	V. Modifications -For older students, have them describe/draw different species of owls common to Houston, and discuss ways they are adapted to the habitat. Ex: prairie (Barn owls) vs trees (Horned owls).