THE FIFTH AVENUE THEATRE

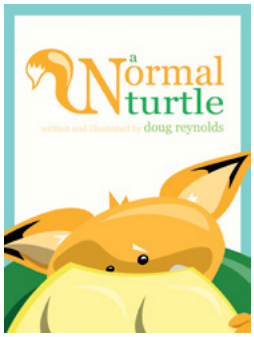
EDUCATIONAL TOURING COMPANY EDUCATION GUIDE:

NORTHWEST BOOKSHELF

FEBRUARY 27 - MAY 12, 2023

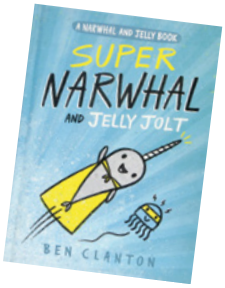
Featuring the following stories:

Alaska's Three Pigs
by Arlene Laverde



A Normal Turtle
by Doug Reynolds

Sonya's Chickens
by Phoebe Wahl



Narwhal: Unicorn of the Sea
Super Narwhal & Jelly Jolt
by Ben Clanton

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NORTHWEST BOOKSHELF

FEBRUARY 27 - MAY 12, 2023

Directed and Choreographed by **Jimmy Shields**

A Normal Turtle: Book, Music, and Lyrics by **Orlando G. Morales**

Alaska's Three Pigs: Book, Music, and Lyrics by **Christopher Guilmet**

"Book Report": Book, Music, and Lyrics by **Richard Gray**

Narwhal & Jelly: Book, Music, and Lyrics by **Justin Huertas**

Sonya's Chickens: Book and Lyrics by **Leslie Wisdom**;

Music by **Rheanna Atendido**

2018/19 Score Arrangement by **Steven Tran**

2022/23 Book Arrangement by **Maggie Lee**

2022/23 Score Arrangement by **Annastasia Workman**

This Education Guide offers supplementary, state standards based curriculum containing educational content, interactive activities, opportunities for reflection, and resources based on the themes of the Northwest Bookshelf 2023 stories. This guide can be utilized before or after experiencing the show. Questions? Reach out to educationaltouring@5thavenue.org

This 2023 Education guide was created by The 5th Avenue Theatre staff with guest contributors QuiQui Dominguez, Teague M. Parker, and Marty Smith.

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CLICK HERE or scan the QR code to access the show page which includes the show program and a “Spotlight On” video interview with Director and Choreographer Jimmy Shields!

Educational Touring Company is generously sponsored by:

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*Deceased

We received additional support from the following donors who support The 5th’s high-quality arts education programming: 4Culture, ArtsFund, The Ash Estate, Banner Bank, Rex and Angela Bates, Bobbe and Jon Bridge, Cascade Asset Management Company, City of Seattle Office of Arts & Culture, Davis Wright Tremaine, Freestone Capital Management, Tom and Susan Handley, Wanda J. Herndon, Suzanne Hittman, HomeStreet Bank, King County Creative, KPMG, Laird Norton Wealth Management, Martin Nelson & Company, Inc., The Norcliffe Foundation, Peter and Susan McClung, PNC Bank, Hirayama and McKnight Families, National Endowment for the Arts, Claudia and Bob Nelson, Potelco, Inc., Regence BlueShield, Retail Management Solutions, SAFECO Insurance, The Herman and Faye Sarkowsky Charitable Foundation, Sound Community Bank, University of Washington, and Washington State Arts Commission.

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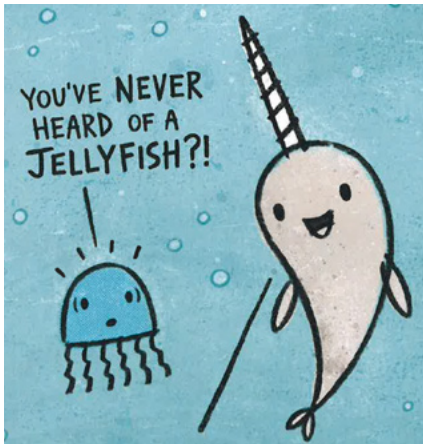
Photo Credit: Andrew Garrett, Northwest Bookshelf 2019



All of the musicals in *Northwest Bookshelf* were adapted from books! People who make musicals get ideas from many places, but often they have read and loved a particular book and decide to make it into a musical theater piece. The writers who wrote the musicals in Northwest Bookshelf chose children's books they liked and turned the stories into musicals.

To make a musical, someone must write the **lyrics**, or words of the songs. This person is called a lyricist. Someone must also write the music — the melodies used for singing the words. This person is the **composer**. Finally, most musicals have **dialogue**—the conversations between characters that is spoken instead of sung—and in musicals this is called the book. The **book writer** creates (or adapts) the musical's story. One person may perform two, or even all three, of these roles.

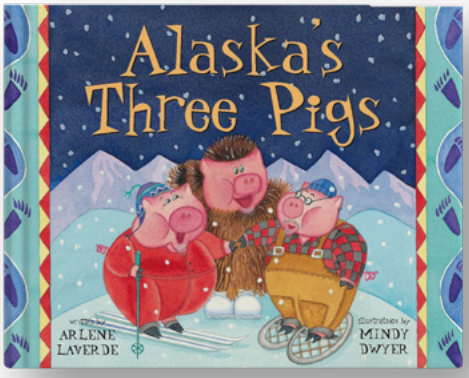
Northwest Bookshelf features five books written by authors from the Pacific Northwest. Each story has been adapted into a short musical by Pacific Northwest artists. See the synopsis below to learn about each of the stories.

Photo Credit: Andrew Garrett, Northwest Bookshelf 2019

SYNOPSIS

Northwest Bookshelf follows the story of four students who have learned that they need to write a book report for a class assignment. They go to their library together in search of an exciting book to select and read. As each of the students pulls out a book from the shelves, they dive into the story, bringing those characters to life through musical adaptations and experiencing the joys that reading and imagination can create!

The 2022-23 Northwest Bookshelf includes musical theater adaptations of the following stories:

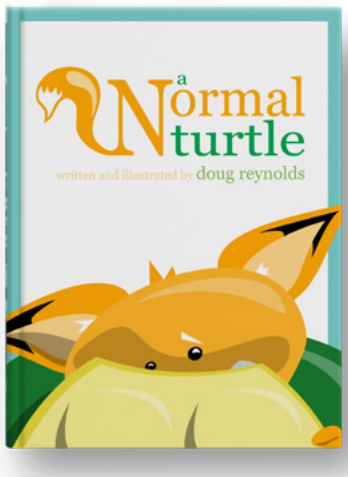


ALASKA'S THREE PIGS
BY ARLENE LAVERDE

Features the classic story of those three irresistible little pigs, except this time they love to camp, fish, and ski! After playing under the midnight sun in Alaska, it's time for the three pigs to get busy and build safe homes in a wintery wonderland, but what kind of structure can withstand a hungry bear awakened from hibernation?
Themes: Adventure, Working Together

A NORMAL TURTLE
BY DOUG REYNOLDS

A young fox gets stuck in a turtle shell. As a result, the kit is raised as a turtle. Fox knows that they are not who they appear to be on the outside. Through the encouragement of friends and family, Fox finds the courage to come out of their shell and love themselves as they are.
Themes: Self-Acceptance, Family



NARWHAL: UNICORN OF THE SEA & SUPER NARWHAL & JELLY JOLT
BY BEN CLANTON

Narwhal is a happy-go-lucky narwhal. Jelly is a no-nonsense jellyfish. The two might not have a lot in common, but they do love waffles, parties and adventures. Join Narwhal and Jelly as they discover the whole wide ocean together in a series of adventures from forming their own pod of awesomeness with their ocean friends, to finding their inner superheroes and figuring out what their superpowers are.
Themes: Friendship, Believing in Yourself and Others

SONYA'S CHICKENS
BY PHOEBE WAHL

Sonya lives on a farm and raises three chickens. She feeds them, shelters them, and loves them. Under her care, the chicks grow into hens and even give Sonya an egg! One night, Sonya hears noises coming from the chicken coop and discovers that one of her hens has disappeared. Where did the hen go? What happened to her? When Sonya discovers the answers, she learns some important truths about the circle of life and caring for another creature.
Themes: Love, Loss, and the Cycle of Life

CHARACTER BREAKDOWN

ALASKA'S THREE PIGS BY ARLENE LAVERDE

Pigs (Stu, Phil, and Bob) - Three pig siblings who are excited to adventure in Alaska, searching for a new place to call home. They each have different ideas of what kind of spot might make the best and safest home, and they learn to work through their disagreements together. In our musical adaptation, we named the pigs Stu, Phil, and Bob.

The Bear - A grizzly bear who was hibernating in a nearby cave in Alaska when they were woken up by the pigs. The bear is not happy to be disturbed and wakes up very, very hungry.

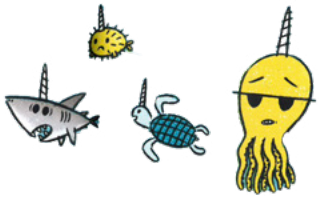
A NORMAL TURTLE BY DOUG REYNOLDS

Fox - Gets stuck in a turtle shell as a young pup and is raised by turtles. Fox likes to move fast, fast, fast even though their family moves at a different speed. They feel like something about them is different from the turtles and wonder how they can express their true self on the outside.

Parent Turtles - Raise the baby fox as one of their own with the rest of the turtles. They like to move slowly and steadily.

Friend Turtle - A good listener and friend to Fox. Encourages Fox to be who they are and come out of their shell, if they want to.

NARWHAL: UNICORN OF THE SEA & SUPER NARWHAL & JELLY JOLT BY BEN CLANTON



Narwhal - A bubbly, friendly marine mammal who wants to be a superhero and build a pod of awesomeness with friends

Jelly - A shy invertebrate who becomes best friends with Narwhal and also decides to join Narwhal's adventures as the superhero, Jelly Jolt.

Other Ocean Friends: - Turtle, Shark, Octopus, Sea Star, Crab

SONYA'S CHICKENS BY PHOEBE WAHL

Sonya - A young girl who lives on a farm and is excited to be in charge of caring for her very own chicks

Parent - Takes care of Sonya and help her learn about the cycle of life

Chicks/Hens - Raised by Sonya, they start as baby chicks in the story and then grow into bigger hens!

Fox - A wild animal in the woods who is looking for food to feed their pups

MUSICAL THEATER VOCABULARY

ACTOR:	A person whose profession is acting on the stage, in movies, or on television
AUDIENCE:	The people who watch and experience a show
BLOCKING:	The process of deciding how, when, and where actors move during a scene.
BOOK:	The script of spoken dialogue scenes in a musical.
CENTER STAGE:	The part of the stage directly in the center.
CHARACTER(S):	The person, animal, or object depicted in a story, play, movie, or musical
CHOREOGRAPHER:	The person who stages the dances and musical scenes of a show
COMPOSER:	The person who writes the music for the songs. Sometimes the Composer is also the Lyricist.
COSTUME:	The clothes that the actors wear in the play or musical.
CUE:	Something that serves as a signal to an actor to enter or begin a specific part of their performance. A cue can be given audibly, verbally, or visually.
DESIGNERS:	The people who design different elements of a show to help make the Director's vision of a show come to life. For example, many shows have a Costume Designer, a Set Designer, a Props Designer, a Lighting Designer, a Sound Designer, and/or a Hair/Makeup Designer.
DIALOGUE:	The words characters say to each other in a play or musical.
DIRECTOR:	The person who determines what actions are needed, coaches the actors, and makes sure the storytelling is clear.

DOWNSTAGE:	The part of the stage closest to the audience.
LYRICIST:	The person who writes the words of a song. Sometimes the Lyricist is also the Composer.
LYRICS:	The words in a song.
MUSIC DIRECTOR:	The person who directs the singing and musical elements in a musical.
MUSICAL STYLE:	A particular kind, sort, or type of music.
PROPS:	The objects, other than scenery, immovable furniture or costumes, that an actor holds or uses that are part of the set of a play, musical, or movie.
PROSE:	Written or spoken language in its ordinary form, without poetic devices.
RHYMES:	Similar sounds between words or the endings of words.
RHYTHM:	A strong, regular, repeated pattern of movement or sound.
SET OR SCENERY:	The complete stage setting for a play or musical. The walls, doors, window, and furniture used to establish the location of the play or musical on stage.
STAGE LEFT:	The side of the stage on the actor's left.
STAGE MANAGER:	The person who organizes all of the different components of a show and supports all communications between the directors, designers, actors, and tech crew to make sure everything goes smoothly during a performance.
STAGE RIGHT:	The side of the stage on the actor's right.
TECH (OR STAGE) CREW:	The people who manage and operate all of the technical elements of a show for the set, props, costumes, hair/ makeup, etc.
UPSTAGE:	The part of the stage farthest away from the audience.

K-2 ACTIVITIES

FROZEN PICTURES EXPLORATION

THEATER

Recommended Age: K-2nd Grade

Time: 10-15 minutes

Activity Description: Participants will create frozen pictures with their bodies to explore the different characters in the show. After embodying the characters through physicality, participants will have the opportunity to add sound to their frozen pictures and/or explore adding emotions to their frozen pictures through facial expressions and physicalization.

Materials Needed: Space to move around and comfortable clothing/ shoes for movement

Vocab Words: Statue, acting, character, story, voice, actor neutral

Theatre State Standard: Anchor 1, Creating; Performance Standard (TH:Cr1.1.K)

Essential Question: What happens when theater artists use their imaginations and/or learned theater skills while engaging in creative exploration and inquiry?

Enduring Understanding: Theater artists rely on intuition, curiosity, and critical inquiry.

Learning Goals:

Students will:

- Remember characters in theatrical texts (stories) and performances and identify the appearance and actions of the characters.
- Use their bodies and voices to imitate, explore, and convey different characters, animals, and emotions from the stories (and beyond)
- Reflect and imagine how different characters in the books were feeling at different times throughout the stories

FROZEN PICTURES EXPLORATION

Instructions:

1. Brainstorm a list of animals from the *Northwest Bookshelf* show or stories that you want to explore as a group, writing suggestions on a board. If desired, you could research as a class different images of those animals and what they look like in different actions.
   Here are some starting examples:

   a.Bear b.Pig c.Turtle d.Fox e.Narwhal

2. Build a statue: Select one of the animals as a statue that students will create with their bodies and invite them to use their whole body to create a frozen statue of that animal. State the animal prompt and give them a countdown. Example - “Create a fox statue now in 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, freeze!” Take a moment for participants to hold their frozen statue as you observe all of the unique and interesting statues in the room.

3. Share observations with your students as you explore the room in response to their creations using “I like” or “I notice” or “I see” statements. Examples: “I notice that Jamall is using their arms to create an elephant trunk that wraps up really high towards the sky.” or “I see Madison is bending their legs and balancing like a flamingo.” etc.

4. Add a sound. “On a countdown of 3-2-1, I’m going to hit the unmute button on these statues to hear a sound that all of these animals make together. 3-2-1- [listen].” Then hit the “mute” button again for the animals to be silent.

5. Return to actor neutral. Invite students to let go of that statue shape they made, shake it off, and return back to an “actor neutral” pose, ready for the next animal cue from you.

6. Repeat steps 2-5 with new animals until you assess that all of the participants have a solid grasp of the activity steps and directions.

7. Add emotions. “I wonder how these animal statues might change if we add some emotion adjective words to them. What about a hungry bear?” (Repeat steps 2-5, this time observing how they used their facial expressions and bodies to portray both an animal character and an emotion).

8. Continue exploring emotion concepts as much as you’d like! You could explore adding an emotion adjective to an animal noun, or you could also reference different parts of the story and ask participants to reflect on how that character was feeling then. For example, “I wonder how Fox was feeling when they were stuck inside a turtle shell? What do you think? Show me a statue of how Fox is feeling when they’re stuck in a turtle shell in 10, 9, 8…..”

Tip: If you have a large number of participants and limited room for movement, you can separate participants into 2-3 groups and have each group take turns. As participants become familiar and comfortable with the activity, you could even create a “stage” and “audience” space in the room for the designated statues and observers.

FROM AN EGG TO A CHICKEN:
VISUAL ARTS + SCIENCE

Recommended Age: K-2nd Grade

Time: 15-25 minutes

Activity Description: Participants will learn about the embryo development in chicken eggs.

Materials Needed: paper and drawing materials (markers, crayons, colored pencils, etc.)

Vocab Words: chicken, hen, rooster, chick, egg, embryo, development

Science State Standard: 1-LS3.A, Heredity: Inheritance of Traits LS3.A.

Essential Question: What patterns in the natural world can be observed for the life cycle of animals (in this case, chickens)?

Enduring Understanding: Young animals are very much, but not exactly like, their parents.

Learning Goals:

Students will:

- Reflect on the similarities and differences of baby chicks and adult chickens
- Learn about the embryo development of a chicken
- Create a visual story of a chick hatching from an egg

Instructions:

1. Refer to *Sonya's Chickens* and how Sonya took care of chickens on her farm. Where did those chickens come from? Does anyone know how a chicken is born? Refer to when Sonya's hen laid an egg near the end of the story and a new chick was born.

2. Read through the "CHICKENS" Fact Sheet from Woodland Park Zoo together to learn more about chickens.

3. Provide copies of "A Chick Hatches - Embryo Development Wheel" sheet to students and follow the instructions together to create a visual story of a chick hatching from an egg.

4. Look at photos of grown hens and roosters and compare them to the visual story of a chick hatching from an egg. What are the similarities between how baby chicks and hens/roosters look? What are the differences?

FROM AN EGG TO A CHICKEN:
VISUAL ARTS + SCIENCE

Bonus Activities:

What are some other things that grow in eggs? Brainstorm and research as a class and create a list together.

Act out hatching from inside an egg! Instruct students to turn into eggs on the floor and slowly crack open their shells and hatch. How do you move as a baby chick after hatching? You could set this activity to a countdown or instrumental music.

Fun Facts: Did You Know?

- Hens lay one egg approximately every 28 hours.
- A rooster is not needed for a hen to produce eggs for eating. Roosters are only needed to produce fertile eggs for hatching.
- Chickens can lay eggs in varying colors including white, dark brown, light brown, and even shades of green. There is no nutritional difference among eggs of different shell colors.
- You can tell what color of egg a hen will lay by looking at the color of her skin on her earlobe.

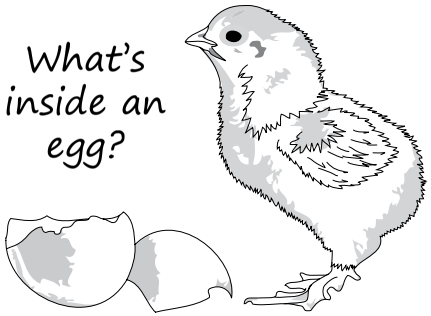
A Chick Hatches—Embryo Development Wheel

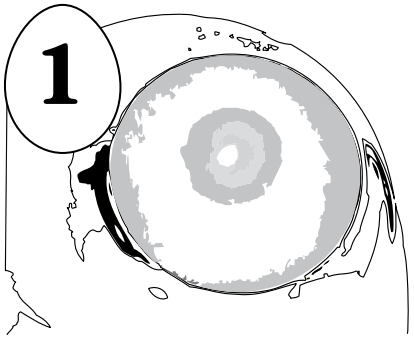
Color the pictures. Use scissors to cut on the dotted lines. Glue the title picture, "A Chick Hatches," in the center of a paper plate, and put that plate aside. Line up each of the remaining pictures in numerical order, starting with Day 1 and ending with Day 21. Glue them in order around the edge of a second paper plate. Place the first paper plate over top of the second paper plate, and place a metal brad through the center of both paper plates. Finally, cut a three-sided hole on the bottom edge of the top plate so that you can see one step of development at a time as you rotate the bottom plate. Now you can tell the story of a chick hatching from an egg.

Cut here

A Chick Hatches

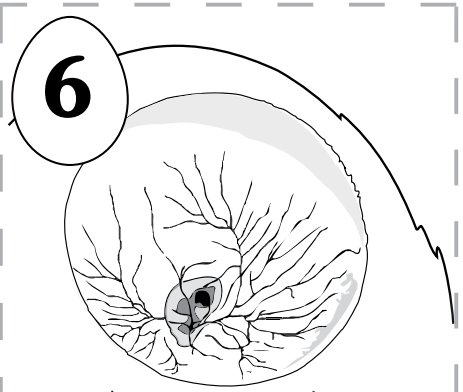
What's inside an egg?



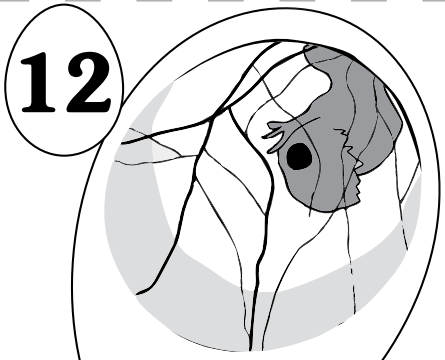


A baby chick begins as a small white patch within the yellow yolk.

Can you see the chicken's head and heart?



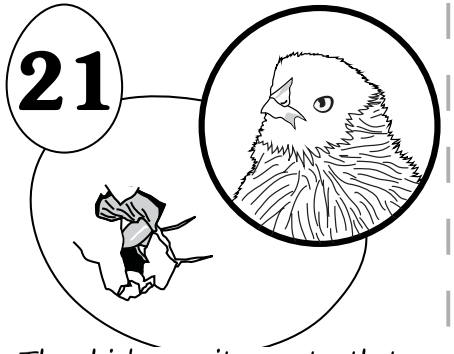
Now there are two wings, two legs, and a beak!



Wow! The baby chick has feathers and claws on its toes.

The baby chick will be born soon because it is getting too big and running out of food.

The chick begins to hatch when it breaks into its air cell and takes its first breath.



The chick uses its egg tooth to help break out of the egg. The wet chick will soon dry and have fluffy soft feathers.

SPELLING CHARADES:
THEATER + ENGLISH LANGUAGE ARTS

Recommended Age: K-2nd Grade

Time: 10-20 minutes

Activity Description: Students will play a game of charades prompted by the stories of Northwest Bookshelf and guess answers by spelling.

Materials Needed: Paper/writing utensils, chalkboard/whiteboard, prompt of questions ready, colored pencils, etc.

Vocab Words: charade, acting, characters

ELA State Standard: WA.RL.1.1 Key Ideas and Details 1. (1-LS3-1)

Theatre State Standard: Anchor Standard 4: Performing (TH:Pr4.1.K)

Essential Question: Why are strong choices essential to interpreting a drama or theatre piece?

Enduring Understanding: Theater artists make strong choices to effectively convey meaning.

Learning Goals:

Students will:

- Reflect and respond to a series of prompts about the *Northwest Bookshelf* performance and/or story text
- Use their bodies, facial expressions, and movement to convey a character to their classmates through pantomime
- Observe and respond to their classmates' pantomime performances, relating their performance to a specific character associated with the stories
- Recall from memory (or with prompting from instructor) the spelling of the associated word to the pantomime performance either through sounding out the word or writing the spelling of the word

SPELLING CHARADES:
THEATER + ENGLISH LANGUAGE ARTS

Instructions:

1. Prepare a list of charade questions inspired by the *Northwest Bookshelf* stories. Each question's answer will be one word that is appropriate for their classroom's writing level

2. Example: Who was chasing the three little pigs in Alaska? [Answer: bear]

3. Explain the general game of charades to the classroom. One person will be "It" and act out a word using gestures and facial expressions with voices off. Explain that for this charades game, we will guess the word the person is acting out by spelling that word!

4. Demonstrate an example by acting out a word, like dog, for the students. Invite students to guess what you are acting out by spelling that word (either out loud after raising their hand to be called on, or inviting them to write down the spelling of that word on their paper, etc.).

5. Establish a way that students will take turns being "It," through any practices you've previously established in your classroom (raising hand, putting hand on top of head, writing a list of student orders for turns, etc.). Instruct students that when it's their turn, you will give them a question about the *Northwest Bookshelf* stories for them to uncover what their "word" is. Depending on their age and reading/writing level, you could either hand them a slip of paper with the written question, or you could verbally ask the student their question outside of the classroom door (or anywhere that the rest of the class won't hear the question. The only person who should hear the full question is the person who is "It."). The Instructor should ensure that the student understands their question, knows the answer, and provide any support or accessibility measures for them.

6. Student receives their question, identifies the answer, and acts out that word in front of the class using their body, gestures, facial expressions, movement, etc.

7. The rest of the class guesses what that word is by either writing it down on their own paper, sounding it out together as a group, etc. (whatever method is identified as best practice for the group by the instructor).

8. Celebrate any learning or reflection that happened for that charade and continue taking turns with new questions! [repeat steps 4-6].

SPELLING CHARADES:
THEATER + ENGLISH LANGUAGE ARTS

Starting Question Ideas:

consider the writing/reading level of your students and the corresponding level of charades you assess they are successfully engaged in to determine which questions you use

- Who was chasing the three little pigs in Alaska? [bear]
- What animals was Sonya raising on her farm? [chickens]
- Who raised the baby fox? [turtles]
- Who explored Alaska? [pigs]
- Which character has a horn and wants to be a superhero? [narwhal]
- Who came out of their shell? [fox]
- Who has tentacles and became best friends with Narwhal? [jelly or jelly fish]
- What did one of Sonya's chickens lay? [egg]
- Who took one of Sonya's chickens from the coup? [fox]
- What did Narwhal help push up to the sky? [star]
- What was one of the animals in Narwhal & Jelly's pod of awesomeness? [turtle, shark, octopus, sea star, crab]
- What were the student characters looking for in their library? [books]
- What project was assigned to the students? [book report]
- Where do Narwhal and Jelly live? [ocean]
- Where does Sonya live? [farm]

3RD-5TH ACTIVITIES

TABLEAU STORIES:
THEATER + LITERATURE

Recommended Age: 3rd-5th Grade

Time: 10-20 minutes

Activity Description: Participants will work together to create three frozen pictures with their bodies to tell short stories with a beginning, middle, and end.

Materials Needed: Space to move around and comfortable clothing/ shoes for movement

Vocab Words: tableau, actor, perform, beginning, middle, end

ELA State Standard: WA.RL.1.1 Key Ideas and Details 3. (1-LS3-3)

Theatre State Standard: Anchor 6 Performing (TH:Pr6.1.K)

Essential Question: What happens when theater artists and audiences share a creative experience?

Enduring Understanding: Theater artists share and present stories, ideas, and envisioned worlds to explore the human experience.

Learning Goals:

Students will:

- Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g. a character's thoughts, words, or actions)
- Collaborate to create and present 3 tableaus that convey an envisioned world or story
- Engage in stories as audience members and reflect on the sharings

TABLEAU STORIES:
THEATER + LITERATURE

Instructions:

1. Explain that a tableau is a frozen picture. We are going to use just our bodies to tell a short story.

2. If in a large group, separate students into small groups (3-4 people per group)

3. Talk through the story of any version of "The Three Little Pigs" (or *Alaska's Three Pigs* by Arlene Laverde!) to ensure everyone has a shared understanding of the story.

4. Now have each group create 3 tableau of the stories. These 3 frozen images will represent the beginning/middle/end of the story. Give each group 5-7 minutes to create their 3 tableaux.

5. Each group shares their 3 tableaux

6. Reflect as an entire class:
   a. What similarities did you notice in the presentations?
   b. What differences did you notice?

Bonus: Continue creating more tableaux in small groups exploring other stories from the *Northwest Bookshelf* presentation as prompts. Instructor could even write down the titles of these stories (and/or other stories they've read recently in class) on pieces of paper, place in a bowl/container, and have each small group draw one prompt for their group. Each group presents their tableau and guesses what stories each other depicted.

DRAWING NORTHWEST BOOKSHELF STORIES:
THEATER + ENGLISH LANGUAGE ARTS

Recommended Age: 3rd-5th Grade

Time: 10-20 minutes

Activity Description: Participants will explore the world of the Northwest Bookshelf stories by drawing their own interpretations of different environments and characters.

Materials Needed: paper and drawing materials (markers, crayons, colored pencils, etc.)

Visual Arts State Standard: Anchor 1.1 Creating (VA:Cr1.1.3)

Vocab Words: tableau, actor, perform, beginning, middle, end

Essential Question: What conditions, attitudes, and behaviors support creativity and innovative thinking? What factors prevent or encourage people to take creative risks? How does collaboration expand the creative process?

Enduring Understanding: Creativity and innovative thinking are essential life skills that can be developed.

Learning Goals:

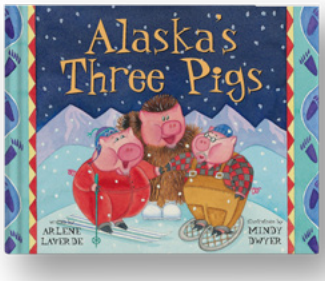
Students will:

- Apply the creative process, using the ideas, skills, foundations, and techniques of visual arts to create original works of art in two and/or three dimensions in response to given prompts

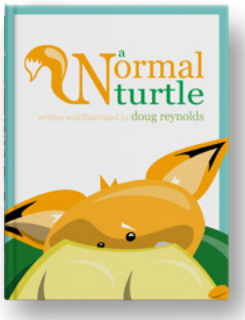
- Use technique and skills required to create unique visual art from their own perspectives in alignment with the given prompts

DRAWING NORTHWEST BOOKSHELF STORIES:
THEATER + ENGLISH LANGUAGE ARTS

Instructions: Guide students through different drawing themes that explore their relation to the stories. Pick one of the themes below and give students 10-20 minutes to create and share with the group, or a peer.



Alaska's Three Pigs:
Create a visual art piece of your Alaskan house. How would you design your home? What types of materials would you use to keep your home warm, and the bears out? Add details by drawing the natural environment of Alaska.



A Normal Turtle:
Create a visual art piece of you and the different people in your community. Who do you go to school with? Who is in your family? Add them to your picture. Try to add as many people as you can from your community around you.

Sonya's Chickens:
Create a visual art piece of you on your dream farm and garden. What animals are there that you take care of? Be sure to add details like how these animals shelter, and what they eat. Add yourself to the picture taking care of your farm.

Super Narwhal:
Using the materials you have drawn yourself as a superhero! What does your superhero disguise look like? Do you have a symbol? Show me what your superpower would be. Do you have a sidekick? What is their power? How do you two work together to use your powers to help others?

TURTLES IN WASHINGTON STATE:
SCIENCE

Recommended Age: 3rd-5th Grade

Time: 10-20 minutes

Activity Description: Participants will learn about some of the different types of turtles in Washington state and their qualities and characteristics.

Materials Needed: Print-out of turtle activity sheet (included below) for each participant.

Vocab Words: native species, introduced species, basking, endothermic, brumation, omnivorous, warm-blooded, reptiles, red-eared slider, painted turtle, Western pond turtle, snapping turtle, spiny soft shell turtle

Science State Standard: 3-LS4 Biological Evolution: Unity and Diversity: Natural Selection LS4.B:

Essential Question: What different characteristics can be found between individuals within the same species?

Enduring Understanding: Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing.

Learning Goals:

Students will:

- Learn about the different types of turtle species found in Washington state
- Identify different characteristics between individual turtles through images
- Research and reflect on ways that different characteristics of turtles provide advantages to their survival in specific environments

Instructions:

1. Introduce the concepts and key terminology about turtles below in a conversation with students.
2. Provide a printed out turtle activity sheet for each participant to complete.
3. Reflect as a group on the answers to the activity sheet.
4. Research as a class or in small groups ways that these different types of turtles survive in their environments and what characteristics they have that provide advantages to their survival.

TURTLES IN WASHINGTON STATE:
SCIENCE

The turtles in *A Normal Turtle* are land-dwelling turtles you can find living in Washington state. There are several native species and introduced species of turtles in Washington.

All turtles are reptiles, and all reptiles are ectothermic (sometimes called “cold-blooded”) which means that they depend on external sources of heat to regulate their body temperature. This is why you will often see turtles sitting in the sun (also called basking) to get warm. This is different from mammals who are endothermic (sometimes called “warm-blooded”), which means they can regulate their body temperature internally.

Because turtles rely on external sources for heat, when the seasons change and the weather cools down, turtles and other reptiles enter a state called brumation. This is similar to hibernation, and is when a turtle enters a dormant state underground, usually in a burrow, to wait out the colder months and conserve energy. During their period of brumation, a turtle won’t eat or drink anything, so when spring comes and the weather warms up, they will be very hungry! Most land-dwelling turtles are omnivorous, meaning they eat a wide variety of plants, animals, and insects.

All the turtles listed below can be found in Washington state. The introduced species, like the Red-eared slider, most likely started out as someone’s pet, who then either escaped or was let loose in the wild, where they reproduced. Although it can seem harmless to release a pet into the wild when they outgrow their enclosure at home, it can actually be very damaging to native species.

TURTLES IN WASHINGTON STATE:
SCIENCE

Introduced turtles in the wild means more competition for food and other resources for the native turtles, which can cause their populations to decrease. If you have a pet turtle who needs a new home, locating a reptile rescue to help you is the best option!

- Painted turtle (native, common): has a patterned skin
- Western pond turtle (native, uncommon): small and brown
- Red-eared slider (introduced, common): has bright red streaks on the side of their head
- Snapping turtle (introduced, uncommon): large and brown
- Spiny softshell (introduced, uncommon): has a long nose and a flat shell

Glossary of Important Words:

- **Basking**: When a reptile sits in the sun or another heat source to warm up their body temperature.
- **Brumation:** When a reptile enters a dormant state during cold months, usually underground.
- **Ectothermic:** Describes how a reptile regulates their body temperature using external sources, like the sun.
- **Endothermic:** Describes how a mammal can regulate their body temperature internally.
- **Introduced Species:** An animal that wasn't originally native to the area, who was introduced to the ecosystem.
- **Native Species:** An animal that is native to the area and is an original part of the ecosystem.
- **Omnivorous:** A diet consisting of a wide variety of plants, animals, and insects

TURTLES IN WASHINGTON STATE:
SCIENCE

MATCH THE TURTLES!

Take a look at the images of Washington turtles below and see if you can match them to the correct name!

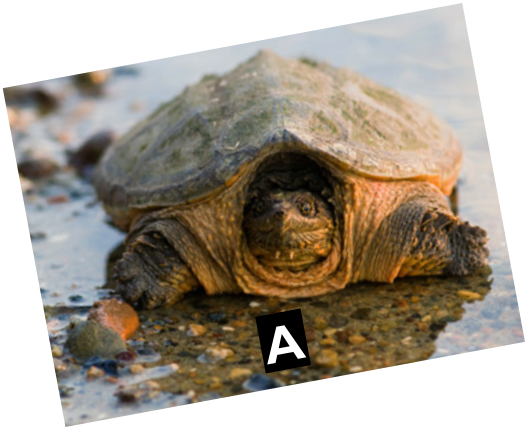
_____ Red Eared Slider

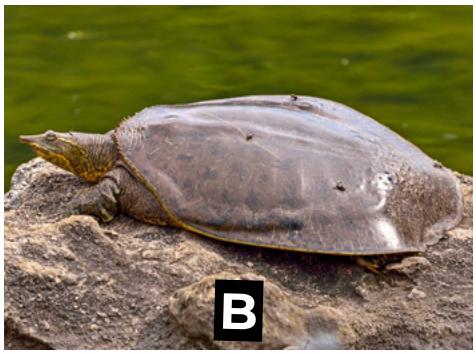
_____ Western Pond Turtle

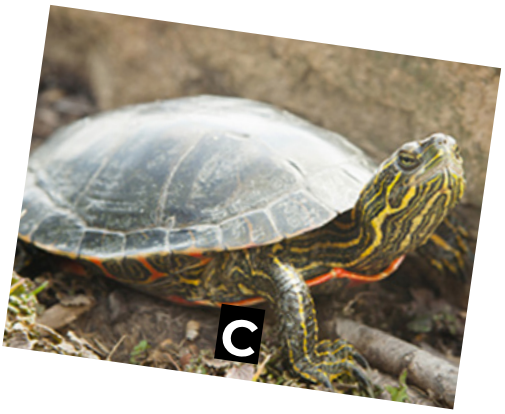
_____ Spiny Softshell

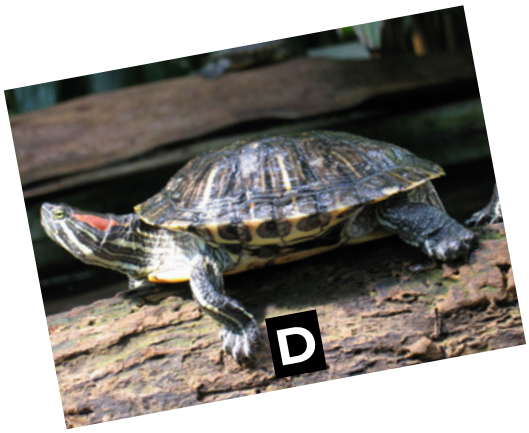
_____ Painted Turtle

_____ Snapping Turtle









A. Snapping Turtle
B. Spiny Softshell
C. Painted Turtle
D. Red Eared Slider
E. Western Pond Turtle

ALL AGES

ANIMALS GET SAD SOMETIMES TOO:
A Self-Care Activity for All Ages

Recommended Age: All Ages

Time: 10-20 minutes

Activity Description: Participants will learn about and reflect on ways that animals live in their own communities and have feelings, similarly to people. Through group discussion, individual reflection, and/or written or conversational activity, participants will identify ways that they can engage in self-care and self-management and regulation of their emotions.

Materials Needed: Board for group brainstorming; option to print out hand-out with prompts for students to write in or draw their responses

Vocab Words: self-care, self-regulation or management, emotions

SEL State Standard: Standard 2: Self-Management—Individual can regulate emotions, thoughts, and behaviors. Benchmark 2A: Demonstrates the skills to manage one's emotions, thoughts, impulses, and stress in constructive ways.

Essential Question: What happens when we notice our emotions, thoughts, and behaviors and make an intentional and conscious choice to self-regulate and care for our wellness in this way?

Enduring Understanding: Regulating and managing emotions are essential life skills that can be developed.

Learning Goals:

Students will:

- Learn about and reflect on ways that animals exist in communities and experience emotions similarly to humans
- Identify ways that animals might address their needs individually and collectively
- Reflect on the diverse range of emotions or thoughts they experience
- Identify and practice ways that they can self-regulate and support their emotions

ANIMALS GET SAD SOMETIMES TOO:
A Self-Care Activity for All Ages

Instructions:

1. Share about how the different types of animals seen in Northwest Bookshelf live in their own communities and have feelings too, kind of like people!

   In *Sonya's Chickens*, we watch Sonya care for her chickens, and grieve when a hungry fox attacks. A group of chickens is called a flock. Chickens are very social birds who bond and form friendships with each other, and they can also bond and be affectionate with their owners, which makes them wonderful family pets. Just like Sonya, chickens care for each other and get sad when they lose a friend.

   In *Alaska's Three Pigs*, we watch the three pigs become frightened by an angry bear. A group of pigs is called a drift or drove. Pigs can feel sadness if they are isolated from each other and are happier when they live with other pigs as their friends or companions, just like how Stu, Bob, and Phil felt safest when they stayed together in one house.

   In *Super Narwhal & Jelly Jolt*, Narwhal was looking for their pod. Narwhals, like many whales, prefer to travel in social groups, or pods. Their pods can be small with only a couple of animals or can be larger with several hundreds of whales, and their pods help each other survive. Narwhals can easily feel stress and use up their energy responding to stressful events. Sometimes Narwhals are adopted into a pod of other animals, like Belugas, similar to how Narwhal creates their own pod of awesomeness of different animals in the story.

   In *A Normal Turtle*, we watch the turtle family support Fox as they come out of their shell. While turtles don't have to live with other turtles as companions, they can feel stressed, sad, or anxious if they are not in the right environment, if there's a sudden change in their surroundings, or if they are overhandled by people and feel overstimulated. They like to hide in their shells to help them feel safer and cope with stress, and they also like to have a basking spot where they can feel warm, dry and soak up some sunshine.

   It's important to remember that being sad sometimes is okay. It's a feeling all humans and many animals alike experience! In fact, some of the ways that we care for a sad chicken are very similar to ways we can take care of ourselves or our human friends when they are sad!

2. Use any of the stories above as inspiration and invite students to reflect on some self-care things they can do for themselves. Below is an example using chickens as inspiration. Invite students to either write down a word that represents their answer or help a student sound out the letters for a word that represents their answer.

ANIMALS GET SAD SOMETIMES TOO:
A Self-Care Activity for All Ages

Instructions:

Things a Chicken Does When They're Sad
(that we can do too!)

Eat your favorite meal. For a chicken, maybe they get a treat of a meal worm or some fruit. For a person, this could be a plate of your favorite food.

What are your favorite foods? Discuss as a group, with the instructor writing ideas on the board.

- _____
- _____
- _____

Be physically comfortable. A chicken fluffs up their feathers and gets cozy in their nest box to feel comfortable and help them relax. We can put on sweatpants and wrap up in a fuzzy blanket.

What's your favorite way to be comfy? Maybe your softest pajamas, or holding your squishiest stuffy? What kind of place do you like to be in to feel comfy? (think of sensory elements such as lights, sound, touch, smells, etc. that are comforting to you)

- _____
- _____
- _____

Ask for a hug. Just like a chicken might cuddle with a friend in their flock, we can ask for a hug from a loved one when we feel sad or choose an item to hold or hug if we want.

Who are some people you like to hug or what are some things you like to hug?

- _____
- _____
- _____

MAD LIBS: 3 LITTLE PIGS

ENGLISH LANGUAGE ARTS

Recommended Age: All Ages

Time: 10-15 minutes

Activity Description: Participants will respond to prompts in a pre-written story to fill in the blanks to create their own unique retelling of "The Three Little Pigs" story.

Materials Needed: writing utensils, printed Mad Libs handout for each participant (included below)

ELA State Standard: WA.RL.3.1 Conventions of Standard English Language

Essential Question: How does understanding the function of standard language play into our level of and capacity for creative writing?

Enduring Understanding: Understanding the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences empowers creative writing.

Learning Goals:

Students will:

- Demonstrate command of the conventions of standard English grammar and usage when writing in responses to the Mad Libs prompts
- Experiment with creative responses to the prompts in alignment with the particular sentence functions
- Explore and reflect on how the entire story's characteristics and meaning can inherently change based on the words provided for the prompts

Instructions:

1. As a group discussion or in small groups/individuals (depending on the age and reading/writing level and access needs), instructor invites students to brainstorm list of words in response to the Mad Lib prompts.
2. Students (with or without guidance) then insert the brainstormed list of words into the Mad Libs prompt for The Three Little Pigs.
3. Conduct a sharing of the completed Mad Libs prompts (whether one as a class or taking turns if each individual or small group completed their own together).
4. Reflect on how the story changed from the previous versions we've heard. **Bonus Option:** Invite students to act out their Mad Libs version of "The Three Little Pigs"through voice, tableau, scene works, etc. (depending on age range, skill level, etc.).

THREE LITTLE PIGS

by: _____

Once upon a time, there were three _____ pigs. One day their mother said,
1. adjective

“You are all grown up and must _____ on your own.” So they left to _____
2. verb 3. verb

their houses. The first little pig wanted only to _____ all day and quickly built his
4. verb

house out of _____ . The second little pig wanted to _____ and _____
5. plural noun 6. verb 7. verb

all day so he _____ his house with _____. The third _____ pig
8. past tense verb 9. plural noun 10. adjective

knew the wolf lived nearby and worked hard to _____ his house out of _____
11. verb 12. plural noun

One day, the wolf knocked on the first pig’s _____. “Let me in or I’ll _____
13. noun 14. verb

your house down!” The pig didn’t, so the wolf _____ down the _____.
15. past tense verb 16. noun

The wolf knocked on the second pig’s _____. “Let me in or I’ll blow your _____
17. noun 18. noun

down!” The pig didn’t, so the wolf _____ down the house. Then the wolf knocked
19. past tense verb

on the third _____ pig’s door. “ Let me in or I’ll blow your house down!” The little
20. adjective

pig didn’t, so the wolf _____ and _____. He could not blow the house
21. past tense verb 22. past tense verb

down. All the litle pigs went to live in the _____ house and they all _____
23. noun 24. past tense verb

happily ever after.

ABOUT THE TEACHING ARTISTS

Marquicia Dominguez (They/Them), known as QuiQui to most, is a Teaching Artist, and Behavioral Therapist in the Seattle area. In 2012 they received a B.F.A in theatre from Cornish College of the Arts and in 2018 received a Master's in Education: Applied Behavior Analysis Programing and Instruction from Arizona State University. They are a Board Certified Behavior Analyst using imagination and creativity to teach life skills and behavioral skills to individuals with autism. Their desire is to create inclusive arts programs for all types of learners, no matter that individual's abilities. QuiQui has worked with such companies as: ACT, Book-It, Greenstage, Seattle Repertory, and Seattle Shakespeare Company. They are co-host of The MirrorStage Podcast: A podcast that showcases Seattle artists and activists doing their part to make waves in the Pacific Northwest.

Amberlee Joers (she/her) is currently The 5th's Associate Director of Education and has been a Teaching Artist and managed arts education programs in the Seattle area for over a decade including work with Seattle Children's Theatre, Seattle Theatre Group, Seattle Rep, Urban ArtWorks, and Village Theatre's KIDSTAGE program, among others. Amberlee is passionate about the intersections of anti-racism, social justice, and disability justice and believes in the ideology that "the role of the artist is to make the revolution irresistible." (Toni Cade Bambara).

Marty Smith (she/they) is a teaching artist and actor originally from Grove City, Ohio. They hold a BFA in Musical Theatre from Cornish College of the Arts. Her work with Seattle Childre's Theatre includes acting on the mainstage in *The Little Prince*, originating and playing the role of Syd in the touring production of *Ghosted*, as well as teaching workshops for *Above Between Below, Ghosted, RiseUp,* and teaching classes for multiple age ranges. They believe that theatre can be used as a gateway to create space that empowers, uplifts, educates, and supports whoever needs it.

Teague M. Parker (He/Him), is an Actor, Playwright, Improviser, Producer, and Teaching Artist. After graduating from Western Washington University (WWU), he founded Come Up Productions (Come Ups), where he began freelance teaching his original Theatre technique, Improv for Wellness: a wellness & performance tool using Improvisation as groundworks to help people uncover their creativity, cultivate awareness & self-worth, and learn to love their unique identity on and offstage. Fusing his extensive acting education including Suzuki, Grotowski, Viewpoints, Linklater, Stanislavski, Chekov, Devising, Commedia dell'arte, and Alexander Technique, his fourteen years of Improv experience, ten years of teaching, and training with ArtsWa through the Teaching Artist Training lab, Teague's work quickly took off. Backed by his practical experience serving as both artistic & education director of WWU's nationally recognized Improv team, The Dead Parrot Society, and his time as an ensemble member at Jet City Improv, Teague brought his Improv masterclasses to regional theaters such as Seattle Rep, Seattle Children's Theatre, Village Theatre, and Jet City Improv. This work soon spread to the graduate students at the University of Florida, Theatre majors at WWU, heart-centered business conferences with Worth the Journey, and institutions such as the Museum of Pop Culture. Teague continues to share his class series & workshops through arts residencies with the drama, health, and English departments at schools such as Roosevelt High School, Everett High School, Open Window Middle School, Connections Homeschool, and Lakeside School. Teague has performed around the country and internationally in plays such as "Topdog/Underdog" by Suzan-Lori Parks for the Teatro UNAM Festival in Mexico City, won the KCACTF Region VII Award for best full-length play, ranked within the top three Improv teams at the College Improv Tournament national competition in Chicago, has served on the Teaching Artist Cohorts of Seattle Rep, Seattle Theatre Group, and Seattle Children's Theatre, and utilizes Come Up Productions to bring free theatre & live events to the WA community. Uniting artist and audiences to form mindful communities, he believes creativity is everyone's birthright, and that we all deserve to reclaim our self-worth.

WORKS CITED

Inside the Egg: Hatching Chicks. Agriculture in the Classroom. https://agclassroom.org/matrix/lesson/362/ Accessed 5 January 2023.

Painted Turtle. Newswise. paintedturtle_1.jpg (3739×2492) (newswise.com) Accessed 15 November 2022.

Snapping Turtle. Finger Lakes Land Trust. 1-snapping-turtle.jpg (2560×1921) (fllt.org) Accessed 15 November 2022.

Spiny Soft Turtle. Reconnect with Nature Org.Spiny-softshell-turtle-Shutterstock.jpg (1500×1001) (reconnectwithnature.org). Acce

Western Pond Turtle. Oregon Zoo. H_orig_western_pond_turtle_gal.jpg (4288×2848) (oregonzoo.org) Accessed 15 November 2022.

WOODLAND PARK ZOO RESOURCES

The 5th thanks Woodland Park Zoo for joining us in community partnership and for providing some additional resources and animal fact sheets for this Education Guide! Below you will find information on how to book a field trip for your group to visit Woodland Park Zoo, along with several PDF animal fact resources for your group to utilize.

Woodland Park Zoo's website has the best, most up-to-date information on field trip registration and resources. Woodland Park Zoo offers two financial assistance options for field trips (School-to-Zoo Levy Funding and Washington Low Income (WALI)). Many schools meet the eligibility requirements, so please check before booking to see if your students and chaperones qualify for free admission. Below are two helpful links for schools in planning field trips to the zoo:

Field Trip Registration & Resources

https://www.zoo.org/fieldtrips

Financial Assistance for Field Trips

https://www.zoo.org/fieldtrips/financial

BROWN BEARS

MORE THAN JUST GRRRR

Ursus arctos

Huge, powerful, and really fond of fresh fruit—that's the brown bear! Though few are left in Washington, this second-largest member of the order *Carnivora* once called our region home, and still ranges widely through the wilderness across much of the northern hemisphere.

BROWN BEARS… AND BEARS WHO ARE BROWN

The common name "brown bear" refers to the overall species *Ursus arctos*. The species is widespread, once found virtually everywhere in the northern temperate zone (between the Arctic circle and the tropics). Living in so many different regions and habitats has given the brown bear a great deal of variability. They have a wider size range than any other bear species, and aren't always the same shade of brown.

In North America, there are two main populations of brown bears: coastal brown bears who once inhabited the Pacific Northwest and are still found in Alaska and western Canada, and grizzly bears, found further inland. There is also a small group of brown bears distinct from the other two populations found on Alaska's Kodiak island and a few nearby islands—they're usually called Kodiak bears!

Though they're still cubs in this picture, Juniper and Fern show some *U. arctos* variability. Juniper (left) is a coastal brown bear, and Fern (right) is an inland grizzly. *Photo By Jeremy Dwyer-Lindgren, WPZ.*

If you live in the suburbs surrounding Seattle or enjoy getting outdoors anywhere in the Pacific Northwest, there's a good chance you'll eventually see a bear. That bear might also be brown… but it won't be a brown bear. There have been vanishingly few verified sightings of *U. arctos* in Washington over the past few decades, and all of them have been deep in nearly-inaccessible wilderness in the North Cascades. But there are about 20,000 black bears (*Ursus americanus*) in our state, who often live very close to humans. And, in the western United States, about half of all black bears are some shade of brown!

BEARS BEING BEARS

Brown bears are *opportunistic omnivores*, meaning they eat whatever plant or animal food they find wherever they happen to be. On average, they eat about 90% plants and only 10% meat! They are fast, strong, and well-armed with sharp teeth and huge claws, and definitely can hunt large prey, but berries, roots, and some occasional *carrion* (an already-dead animal) is a lot easier.

A young Alaskan brown bear successfully caught a fish! *Photo by Natalia Kollegova from Pixabay*.

A year in the life of a brown bear usually starts with emerging from their winter den in the early spring. Adult females may have given birth to cubs while denned for the winter, so their babies will see the world for the first time at that point! Newly-awake bears are hungry, and feast on tender plant shoots and emerging leaves, along with winter-killed carrion.

Later in the spring and the summer, adults who are ready will find one another to mate. Brown bears roam over huge home ranges, and the ranges of males and females overlap. Females who have young cubs will avoid adult males, and spend their time teaching

their cubs how to be bears. The high-sugar fruits of summertime give all the bears plenty of energy for all this activity!

When fall approaches, it's important to put on weight to last through the winter. Bears who live near salmon streams take advantage of the spawning fish to add vital calories to their diets. The weight of a bear needs to increase by around 50% from the time they emerge from their dens to when they're ready to go back to sleep for the next winter. A large male brown bear can weigh up to 1,000 pounds (just over 450 kilograms) at his heaviest! When snows come, the bears den up for the winter and start the cycle again next year.

Brown bears are easily able to stand and walk a few steps on their hind legs, which they usually do to get a better look at something. *Photo by Alexa from Pixabay.*

PEOPLE BEING BEAR-SAFE

While you won't currently encounter brown bears in the Pacific Northwest, you might if you're out camping or hiking in Alaska, Canada, or just further inland in the western United States—and it's just as important to be bear-safe around black bears, who may live near our neighborhoods. Not only can any species of bear be potentially dangerous to people, a bear who thinks they can get food from us is definitely in danger. They will end up eating something poisonous, getting hit by a vehicle, or having to be killed by wildlife officials for putting humans at risk of injury.

Consider these bear-safe tips, and remember: **a fed bear is a dead bear!**

- **Keep household trash securely away from wildlife.** Store the cans inside a garage or secure shed, and only put them out for collection the day they'll be picked up. If you live in bear country, you may also be able to get a wildlife-resistant trash can from your local utility.
- **Feed pets safely indoors.** Leaving dog or cat food out attracts omnivores like bears. If you have livestock who need to be fed outdoors, electric fencing can keep bears away.
- **Be smart about feeding birds.** Birdseed is very high in fat and calories, and bears love it. If you live in bear country, consider attracting birds by growing native plants and offering bird baths, or only offer feeders in the winter while bears are denned.
- **Camp carefully in bear country.** Keep a clean camp, and store food in secure bear boxes if they are available.

A mother bear and her cubs enjoy the summer! *Image by Priyatham Varma Alluri from Pixabay.*

MORE GREAT BOOKS ABOUT BEARS

Alaska's Three Pigs by Arlene Laverde is one of our favorite books featuring a bear! If you can't get enough of reading about bears, here are more of our favorites:

- *Blueberries for Sal* by Robert McCloskey

Ages 3-7. In this classic, first published in 1948, Sal goes picking blueberries with her mother. When she wanders to the other side of Blueberry Hill, she encounters more happy berry enthusiasts—a mama bear and her cubs!

- *Three Bears of the Pacific Northwest* by Richard Vaughn

Ages 4-8. There's no Goldilocks here, just a brown bear and a black bear trying to find the rightful home of blue bear—a stuffed animal who fell out of a travel trailer!

- *Bear Snores On* by Karma Wilson

Ages 3-7. It's cold outside, and one by one, many animal friends duck into bear's cave to warm up. But what will happen when bear wakes from his long slumber to find everyone having a party without him?

CHICKENS

FASCINATING FACTS ABOUT AN ANCIENT BIRD

Gallus gallus domesticus

Chickens—they're everywhere! There are more chickens in the world than any other domestic animal. They come in hundreds of different breeds, some built for laying eggs, some for providing meat, and others for a wide range of different purposes, including looking fancy or being good pets.

THE VERY LONG HISTORY OF CHICKENS

Birds are dinosaurs—the only group of dinosaurs that didn't go extinct. Fossils tell us ground-dwelling, chicken-like birds were one of the main survivors of the K-T Event, the likely asteroid strike 66 million years ago that caused the rapid extinction of most other dinosaur groups.

He looks like a chicken, but he's a wild red junglefowl (*Gallus gallus*) wandering through a park! *Image by Vinson Tan from Pixabay*.

The earliest birds whose fossils tell us were clearly part of *Galliformes*—the scientific order of the chicken—appeared about 45 million years ago. Today, that group includes many familiar and less familiar birds, such as turkeys, quail, pheasants, Guinea fowl, curassows and, of course, chickens.

There's a lot of scientific debate about how long ago chickens were domesticated. Estimates range from 8,000 to 3,000 years ago. However long ago it was, genetic evidence suggests all chicken breeds are descended from the red junglefowl (*Gallus gallus*), a wild species found in southeast Asia, from eastern India to Vietnam and north to the foothills of the Himalayas.

Red junglefowl are adapted to life in bamboo forests. Bamboo mostly spreads by sending out underground runners, and produces seeds rarely. When bamboo does go to seed, red junglefowl hens (females) are able to take advantage of it by producing as much as an egg every day as long as the extra food lasts. This ability made the junglefowl and their domesticated chicken descendants very useful to people—feed them well, get lots of eggs in return!

CHICKENS TODAY

Worldwide, there are over 600 different chicken breeds, about 100 of which can be found in the USA. Many of our most familiar breeds, like the Rhode Island Red or the White Leghorn, are used for the commercial production of meat or eggs. But many others are common backyard chickens, eating bugs, producing eggs and being delightful!

Some chicken breeds were developed for their highly unusual feathers. Silkies have feathers without *barbicels*, the tiny hooks that hold a feather together. So, their feathers are soft and fluffy, and look a lot like fur. Frizzles have feathers whose *shafts*, the center "post" of a feather, curl over backwards. Roosters (males) of the Onagadori breed never molt their tail feathers, which just keep growing. If a rooster of this breed is able to avoid getting his tail feathers tangled or broken, they might reach over 20 feet in length!

Other breeds were developed for other unique qualities. Ameraucanas lay blue or green eggs, and Light Sussex hens lay pink ones. Seramas are the smallest breed in the world, at around six inches tall. And the Ayam Cemani is solid black—including feathers, skin, eyes, beak, and internal organs!

Four Plymouth Rock hens (in the colors buff and barred), a sturdy backyard chicken and one of America's oldest breeds. *Image from Pixabay*.

THE MIND OF A CHICKEN

Just because chickens are common doesn't mean they're boring! Chickens are complex, highly social animals with a lot of brain power.

Research has shown that chickens are capable of *transitive inference*, a form of logical reasoning that allows individuals to learn information without direct experience. For example, hens in a flock will often fight over choice bits of food. Say there was a hen named Molly who always lost fights with one particular hen, Fiona. If a new hen is added to the flock, and Molly watches this hen beat Fiona in a fight, Molly won't try to challenge the newcomer. She knows through transitive inference she can't win.

Hey, got any math I can do for you?
Image by SanduStefan from Pixabay.

But that's okay—Molly can probably keep busy doing some math instead. Yes, math! A lot of animals clearly have a general sense of less or more. But chickens just a few days old can not just count, but do simple math problems. Researchers first counted bits of food behind screens chicks can't see through. Consistently, the chicks chose to go where they'd seen more food go. But then, researchers counted four pieces behind the first screen and one behind the second—then let the chicks watch as they moved two pieces from the first screen to the second. Chicks almost always chose the second screen, showing understanding that 4-2=2 and 1+2=3.

To keep that fancy chicken brain active and happy, people who keep backyard chickens need to provide them with regular *enrichment*, just like we do for zoo animals. Enrichment is anything that keeps animals interested in and engaged with their environment. At WPZ's Family Farm, our hens get a lot of it! First, they have each other—chickens are social, and need chicken friends to hang out with. Our little flock has lots of fun solving food puzzles like treat balls, and getting to hanging produce they have to jump for. Their keepers also train them to do behaviors to help with their care, like standing still on a scale.

FUN FACTS FOR CHICKEN FANATICS

- Chickens have better color vision than people do, thanks to having five types of color-sensing cone cells in their eyes, while people have only three!
- Chickens can make at least 30 different sounds, ranging from contented purrs to screaming alarm calls!
- Chickens have a type of sleep called USWS (unihemispheric slow-wave sleep), in which half of the brain sleeps while the other half is awake, alert, and ready to react to predators or other danger!

MORE GREAT BOOKS ABOUT CHICKENS

Sonya's Chickens by Phoebe Wahl is one of our favorite chicken books! If you can't get enough of reading about chickens, here are more of our favorites:

This chick is ready to greet the world!
Photo by Myriams-Fotos from Pixabay.

- *The Hen Who Sailed Around the World: a True Story* by Guirec Soudee

Ages 4-8. A thrilling true adventure story about the bond between the author and Monique, his chicken companion, as they spend three years sailing around the world.

- *Sam the Man & the Chicken Plan* by Frances O'Roark Dowell

Ages 6-9. Seven-year-old Sam is looking for ways to earn some money. Watching his neighbor's chickens turns out to solve lots of problems!

- *Peep and Egg: I'm Not Hatching* by Laura Gehl

Ages 2-6. Egg is *not* going to hatch—it's way too scary out there! But Peep wants them to do fun things together! Will Egg ever be convinced?

FOXES

ADAPTABILITY CHAMPIONS OF THE DOG FAMILY

Genus *Vulpes* …and a few others

Beautiful, clever, and found on every continent except Antarctica, foxes feature in hundreds of fables, folktales, legends, and other cultural stories from all around the world. And real-life foxes are just as fascinating as their fictional counterparts!

A FOX BY ANY OTHER NAME

Most of the animals we think of as foxes are part of the genus *Vulpes*, sometimes called the "true foxes." There are twelve species in this genus, including familiar species like the red fox (*V. vulpes*), Arctic fox (*V. lagopus*), and fennec fox (*V. zerda*). But there are several species classified in different groups that are usually called foxes as well.

A red fox showing off a thick winter coat. *Image by Alain Audet from Pixabay.*

Whatever their genus and species, all foxes have a few things in common. They are small-to-medium-sized members of the dog family, *Canidae.* They all have pointed snouts and ears, and a long, bushy tail. They're also all able to eat an *omnivorous* diet (including plants and meat), though some will specialize in particular foods—you can probably guess what the crab-eating fox (*Cerdocyon thous*) often prefers! Some foxes are specialized for a particular type of environment—some are found only on a handful of islands, for example—but many others are quite flexible.

If you asked someone from anywhere in the Northern Hemisphere to close their eyes and picture "a fox," it would probably have a beautiful red coat and a white tail-tip. What they're imagining is a red fox, the most widespread of all the fox species. Red foxes are found nearly everywhere north of the equator, with over 40 *subspecies* (a word that means the same thing for wild animals that *breed* means for domestic animals). All those subspecies mean the red fox is adapted for an astonishing range of habitats. They live their foxy lives in the Alaskan wilderness, on the streets of downtown London, throughout Egypt's Nile River valley, and darting out of the way of Bengal tigers in India.

The Seattle area's most common fox species, the gray fox. *Image by CA Dept. of Water Resources.*

If you see a fox in or around Seattle, though, you're most likely seeing a gray fox (*Urocyon cinereoargenteus*), one of the foxes not classified in the genus *Vulpes*. These lovely critters have an ashy gray coat edged with red, and are smaller than red foxes. They're also much smaller than the other, non-fox wild canid who shares our city, the coyote (*Canis latrans*)—a gray fox usually weighs 8-16 pounds (about 3.5-7 kilograms), while coyotes in the Pacific Northwest normally weigh 20-35 pounds (about 9-16 kilograms). Both gray foxes and coyotes keep very busy controlling our region's large population of rats, so we can be happy we have them both!

The Pacific Northwest does have a unique subspecies of red fox, though. The Cascade red fox, *V. vulpes cascadensis*, is found only in alpine and subalpine habitats of the southern Cascade mountain range. Washington state classifies them as endangered due to both their small, isolated populations, and how vulnerable their habitat is to climate change.

A FOX'S LIFE

With so many different foxes worldwide, it's hard to say anything about their adaptations and lifestyle that's true for all of them. But that just makes them more interesting! Consider just this small selection:

Fennec foxes have some very serious ears! *Image by Rethinktwice from Pixabay.*

Fennec foxes are adapted to the harsh environment of north Africa's Sahara desert. They are not just the smallest fox species, but the smallest canid overall, weighing only 1.5-4 pounds (about 0.7-2 kilograms). Their small size helps them survive on small food, such as insects. What's not small about them is their ears! Those huge ears help them dissipate heat. Both mother and father fennec foxes help raise the young, and sometimes several families will dig a connected network of dens!

Arctic foxes have an unusual way of keeping hidden in both winter and summer—they just change color! A few stay dark blue-gray all year long, but for most of them, their thick winter coat is white to help them camouflage in the snow. They're also the only fox species whose foot pads are covered with fur. Every little bit helps when the outside air temperature can dip down to 180 degrees F (100 degrees C) lower than your body temperature!

A Norwegian Arctic fox in that awkward stage between winter and summer coats. *Image by David Mark from Pixabay.*

Island foxes (*Urocyon littoralis*) are found only on the Channel Islands just off the California coast near Los Angeles. There are six subspecies, one for each of the islands. They are an unusually docile population of foxes, with little fear of and even less aggression toward humans. They have a great cultural importance to the Native peoples of the Channel Islands, and the stories they've passed down through generations suggest to scientists they may have semi-domesticated the foxes!

Patagonian foxes (*Lycalopex griseus*) are a little-known species of fox found in the southern third of South America. They live in nearly all the habitats of that region, except high in the Andes Mountains. Like many other foxes, they eat fruit as well as small animals, making them important seed dispersers for several different tree and shrub species.

MORE GREAT BOOKS ABOUT FOXES

Sonya's Chickens by Phoebe Wahl and *A Normal Turtle* by Doug Reynolds are two of our favorite books that feature foxes! If you can't get enough of reading about foxes, here are more of our favorites:

A young red fox checks out the world! *Image by Andreas from Pixabay.*

- *Fox Explores the Night* by Martin Jenkins

Ages 2-5. A *First Science Storybook*, this story introduces the concepts of light and dark to young readers by following a young fox as she searches for dinner!

- *A New Home for Fox* by Ellen DeLange

Ages 5-9. Fox needs to flee his home and find a new place to live. But will he find new friends there? A great story about a fox, but also a good start to conversations about the refugee and immigrant experience.

- *Pax* by Sara Pennypacker

Ages 8-12. Longlisted for the National Book Award, this is a compelling children's novel even adults will enjoy. It follows the strong relationship between a boy and the orphaned fox kit he rescued—and what happens when the world changes around them and the young fox must return to the wild.

PIGS

MORE THAN MEETS THE EYE

Sus domesticus

In so many places around the world, where there's a farm, there are pigs! One of the longest-domesticated animals on Earth, these resilient and adaptable creatures can live alongside people in a huge variety of climates and circumstances. Essentially, where we can live, they can live—and most likely do!

FROM WILD BOAR TO BARNYARD PIG

The domestic pig, *Sus domesticus*, is the domesticated version of the wild boar, *Sus scrofa*. The wild boar was—and in some ways still is—one of the most widespread wild mammals in Europe, Asia, and north Africa. Over the last few centuries, though, its range has changed dramatically.

A mother wild boar in northern Europe with her piglets. *Image by Michal Renčo from Pixabay*

Overhunting, agriculture, and early urbanization forced the wild boar out of some areas, but their adaptability allowed them to expand their range into others. One of the earliest wildlife protection laws was enacted in Britain in the year 1087, establishing harsh punishment for anyone who killed an already-rare wild boar. Nevertheless, the species was extinct there within a century. Wild boars have also been deliberately introduced to places in the world they don't occur naturally, such as the United States, Australia, Brazil, and Argentina. The intent was usually to establish them as a big-game animal for trophy hunters, but they are now *invasive* in those areas (a human-introduced species whose presence in an area has a negative impact on native plants and animals).

Domestication of the wild boar into the pigs we know today seems to have happened quite easily. Archaeological and DNA evidence suggest it happened separately at least three times! The earliest evidence of domestic pigs is from the Tigris River valley in modern-day Iraq, dating back about 15,000 years. Domestication of a different population of *S. scrofa* happened in China around 8,000 years ago, followed by domestication of European boars about 6,000 years ago.

THE MODERN PIG

Worldwide, there are close to 1 billion domestic pigs, which come in a few hundred different breeds. The main reason pigs are farmed is for their meat, so most breeds have been developed for that purpose, but under different climate conditions and through varied cultural farming practices.

One of the reasons pigs were so easily and often domesticated is believed to be that they can thrive on eating food scraps. Wild boars are *opportunistic omnivores*, meaning that they eat whatever plant or animal foods happen to be available that season wherever they happen to be. So, when living alongside people, pigs can eat what would normally go to waste!

Not every pig is there just to eat and be eaten, though. Some very small breeds, like the Vietnamese potbellied pig, are kept as pets. And in Europe, pigs are still sometimes trained to use their excellent sense of smell to find truffles, a prized edible fungus!

A curious pig checks out the camera! *Image by Marion Streiff from Pixabay.*

THOSE TALENTED PIGS

The brain of a pig has a lot going on! It's not easy to be a social, opportunistic omnivore, and requires a lot of complex thought and strong senses.

It won't come as a surprise that pigs are exceptionally good at things that help them find food. Their wild boar ancestors would be constantly exploring their habitat for high-value foods like edible roots, sweet ripe fruit, and high-protein *carrion* (already-dead animals). Domestic pigs still have those abilities. They're great at solving mazes and puzzles, and when they've solved a few in the past, can easily guess what strategies will be the most efficient in solving new ones. They can even solve puzzles virtually. Researchers have trained pigs to play joystick-operated video games, and have found them to be better at that task than chimpanzees!

Three piglets of the kune-kune breed get some rest. *Image by Christel from Pixabay.*

But solving puzzles isn't their only talent—they have exceptional social skills, too. Pigs are able to know and remember many individuals, and have a long memory for who's been nice to them and who has not (whether that's a pig, a person, or maybe even the farm dog). And there's clear evidence of pigs being able to develop complex strategies to get what they want. Imagine two pigs, Sadie and Luna. While Luna's off in the barn but Sadie is watching, a researcher puts a small, delicious treat—just enough for one pig—in a hidden location. When the pigs are let into that location, Sadie goes right for the treat and eats it. But repeat that same scenario a few times, hiding the treat in different places while Sadie watches, and things will start to happen. First, Luna will observe Sadie's behavior to figure out where she's going, and try to get there first. Then, Sadie will see what Luna's doing and begin pretending to head somewhere away from the treat, then suddenly veering off to get to the right place first! The strategies build and build until the researcher finally provides enough treats for everybody!

FUN FACTS FOR PIG ENTHUSIASTS!

- Wallowing, a fancy word for rolling around in mud puddles, is a behavior that protects a pig from getting bitten by flies or mosquitoes and also cools them off, since pigs can only sweat through the end of their snout!
- Pigs make many different sounds for communication, from quiet, contented grunts to excited or alarmed squeals. A pig's alarm squeal can be exceptionally loud—as much as 110 decibels, which is as loud as a power saw!

MORE GREAT BOOKS ABOUT PIGS

It's hard to get much cuter than a wild boar piglet! *Image by Alexa from Pixabay.*

Alaska's Three Pigs by Arlene Laverde is one of our favorite pig books! If you can't get enough of reading about pigs, here are more of our favorites:

- *Olivia* by Ian Falconer

Ages 2-5. Sure, Olivia's more like a little girl than a real-life pig, but considering how smart pigs are, we wouldn't be surprised if they got up to some similar shenanigans!

- *I Really Like Slop!* by Mo Willems

Ages 6-8. We recommend all of the many great books in the *Elephant And Piggie* series, but this is one of our favorites!

- *Charlotte's Web* by E. B. White

Ages 7-11. One of the most beloved children's books of all time, this is a classic story about a pig named Wilbur, beloved by a little girl, and helped out by a kind and magnificent spider named Charlotte. If you haven't read it, now's the time!

TURTLES

HAVE SHELL, WILL TRAVEL

Order *Testudines*

There are so many things to love about turtles! This familiar but diverse group of reptiles, scientifically classified as the order *Testudines*, includes over 350 different species—all the graceful sea turtles, lumbering tortoises, and even the charming freshwater turtles you might find sunning themselves alongside a pond or stream near you.

WHAT MAKES A TURTLE?

The word *turtle* is a casual term that can be used for any member of *Testudines*. Other common terms such as *tortoise* and *terrapin* are used inconsistently to describe turtles with certain groups of characteristics. Those who are commonly called tortoises, for example, generally live on land rather than in or near water—but that's true for several species usually called turtles as well.

A curious Eastern box turtle visiting a human neighbor's patio. *Image by Jan Haerer from Pixabay*

The most recognizable turtle characteristic is their shell, which is made mostly of bone. The upper part of the shell, called the *carapace*, is fused with the turtle's backbone. The belly plate, or *plastron*, is made of bony plates separate from the upper shell. The shell we see isn't bone sticking out, though, it's a layer of skin covering the bones. Like other reptiles, this outer layer of skin is in the form of scales made of *keratin*—the same material that makes up our fingernails and hair.

Turtles are found in a wide variety of habitats all around the globe. Since reptiles are cold-blooded (scientifically called *ectothermic*), turtles are limited to areas with warm weather for at least a good part of the year. You won't find any turtles in Iceland! But outside the Arctic and Antarctic cirles, there are turtles adapted for almost every habitat. There are sea turtles who never leave the warm oceans except to lay eggs, desert tortoises adapted to scorching temperatures and little water, and many different species adapted for temperate and tropical forests, fields, and wetlands around the world.

Definitely don't put your hand in front of this snapping turtle. *Image by simardfrancois from Pixabay*.

Turtles are mostly *omnivores*, eating both plants and other animals. Generally, turtle species who spend more of their time on land tend to eat more plants, and those who spend more time in water tend to eat more animals. Since turtles are not high-speed runners, most eat slower-moving animals like snails, worms, or even clams. But there are exceptions. The formidable snapping turtles of the eastern United States are ambush predators who lie in wait for fish to swim by, then use their long, snake-like necks to strike suddenly!

Another notable thing about many turtles is their exceptionally long lifespans. The oldest known living land animal is a Seychelles giant tortoise (*Aldabrachelys gigantea hololissa*) named Jonathan, who hatched in 1832—so he turned 190 years old in 2022! The biological mechanism that allows some turtles to grow very old isn't well understood, but it isn't limited to the giant tortoises. All the sea turtle species can live 80-100 years, for example, and even the shorter-lived groups such as box turtles can easily live into their 50s.

CAN'T LIVE WITHOUT 'EM… SHOULDN'T LIVE WITH 'EM

Every species of turtle has an important role to play in its habitat. Grazing turtles like the Galapagos tortoise (*Chelonoidis niger*) maintain grassland health by cutting the tops off grass plants, which causes them to grow faster and outcompete woody plants. Land turtles who eat fallen fruit help distribute seeds away from the parent plant. When turtles eat animals like slugs or insects, they help control the populations of those animals. But their eating habits aren't the only things that make them important to the environment—for example, species such as the common box turtle (*Terrapene carolina*) do a lot of digging, which helps loosen and aerate the soil, encouraging plant growth!

Two reasons for hope: baby Egyptian tortoises hatched at Woodland Park Zoo!
Image by Ryan Hawk, Woodland Park Zoo.

While many turtle species have healthy populations, there are others at risk. Turtles are affected by a lot of the same things that endanger other species, such as habitat loss, pollution, and climate change. But turtles also have some risks of their own, one of which is the exotic pet trade.

Because land-dwelling turtles tend to be both super-cute and exceptionally easy to catch, a number of species have been driven to near-extinction just through collection from the wild for sale as pets. In the 1990s, more critically-endangered Egyptian tortoises (*Testudo kleinmanni*, called the Kleinmann's tortoise in the pet trade) were confiscated by customs officials than were known to still exist in the wild! There is hope for these tiny tortoises, though. Woodland Park Zoo is helping maintain healthy zoo populations through the Species Survival Plan, so when safe places in the wild are established, there will be tortoises to return there.

The pet trade isn't just bad for populations—individual animals suffer, too. Turtles are difficult to keep healthy as pets, and often have much shorter lives than they would in the wild. It's just difficult for pet owners to know that, due to naturally long turtle lifespans. Someone may think their turtle lived to a ripe old age at 15, unaware the same animal in the wild could have lived to be 50. But pet lovers shouldn't despair—dogs, cats, Guinea pigs and many other animals who make great pets are readily available through local rescues, and turtles will always be exciting to see in their natural habitats!

MORE GREAT BOOKS ABOUT TURTLES

A Normal Turtle by Doug Reynolds is one of our favorite books about being who you really are—and we like it even more because there are turtles in it! If you'd love to read more turtle stories, here are more of our favorites:

A juvenile green sea turtle doing what sea turtles do best!
Image from Pixabay.

- *I'll Follow the Moon* by Stephanie Lisa Tara

Ages 0-5. A beautiful read-aloud story about a newly-hatched sea turtle making his way to the ocean to join his mama.

- *Galapagos George* by Jean Craighead George

Ages 4-8. A true account by a Newberry Award-winning author of the evolution of the Galapagos tortoise and the life of one individual—the famous Lonesome George, who was the last of his subspecies.

- *Owen and Mzee* by Izabella & Craig Hatkoff and Paula Kahumbu

Ages 4-8. Another true story, this time about the surprising friendship between an orphaned baby hippo named Owen, and a 130-year-old giant tortoise called Mzee.