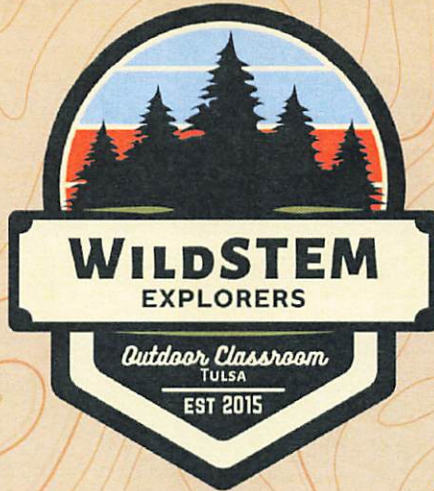


Vထုၼ်P doh-yah-dee-tluh



TRSA SENSEsational Science

DATE: Summer 2026

PROGRAM TRAIL:
Outdoor Classroom Tulsa

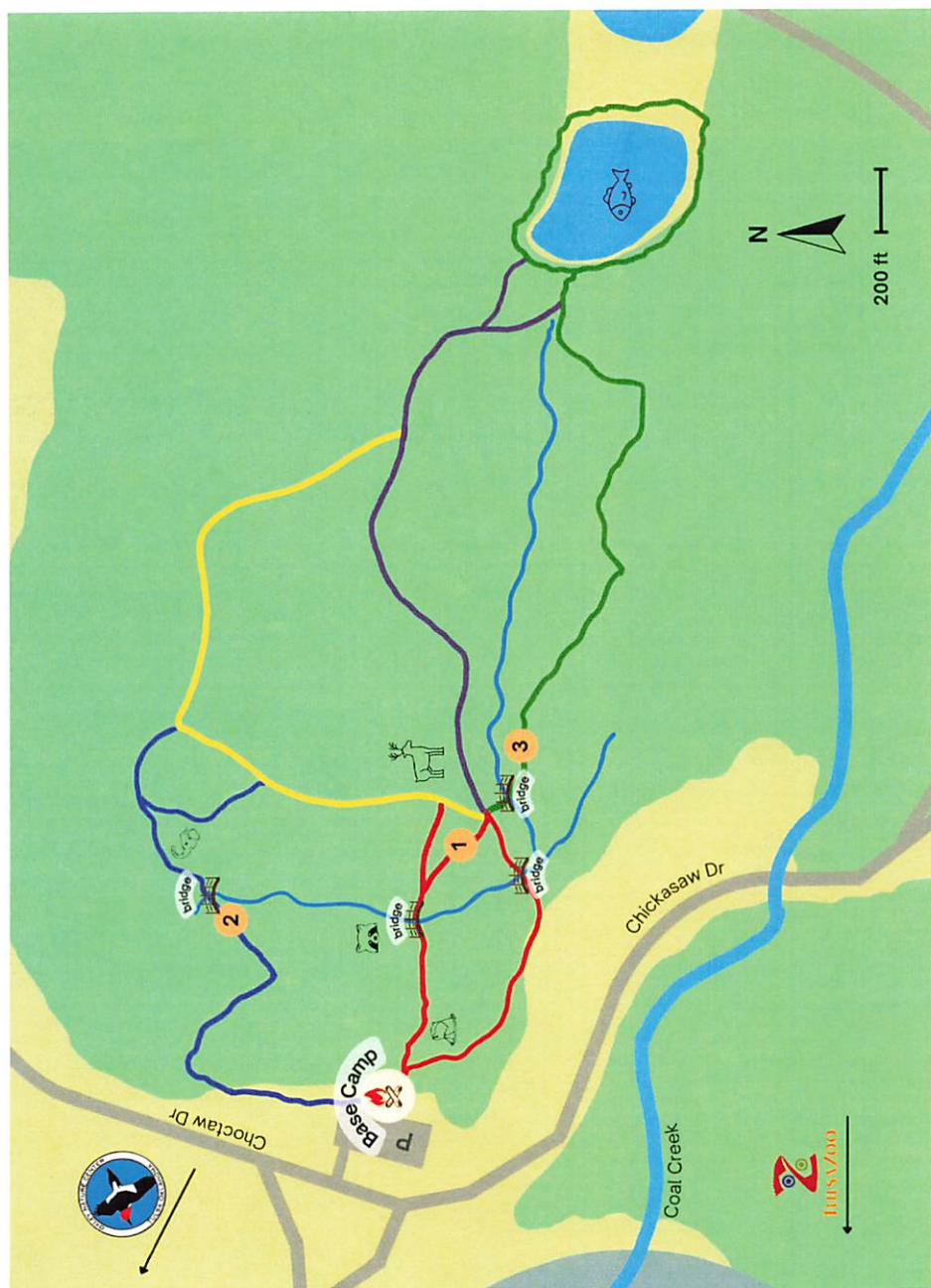
EXPLORER NAME:

Base Camp - Mohawk Park

CURIOSITY • HANDS-ON • LIFE SKILLS

OUR MAP

Trace the path we followed during our hike



POLLINATORS

Cross Pollination

Cross pollination happens when pollen from one plant is moved to another plant, often by bees. This creates seeds that contain traits from both parent plants. Many people think cross pollination changes the fruit they eat, but that's not true. The fruit will look and taste normal this year. Any changes will only appear if the seeds are planted and grown into new plants next year.

How Nectar Affects Honey Taste

- Honey starts as flower nectar collected by honeybees. Different flowers produce nectar with different chemicals, sugars, and aromas.
- Because those chemicals end up in the honey, honey can taste, smell, and even look different depending on which flowers the bees visited.

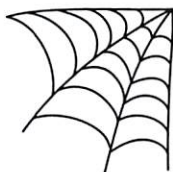
Butterflies Aren't the Only Pollinators!

Pollinators include bees, wasps, flies, moths, beetles, mosquitos, wind, water, birds, and even some shrimp!

Buzz Pollination

Some plants keep their pollen trapped inside special structures called anthers. Bumblebees and some solitary bees use a technique called buzz pollination, where they vibrate their flight muscles to shake the pollen loose. This then allows the flowers to be more successful reproductively because the plants maximize their pollen dispersal with each bee visit, and less pollen is lost.

FOOD CHAIN



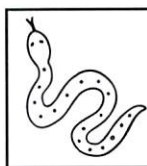
Definitions

- Energy: causes organisms to move and grow
- Predator: an animal that hunts or consumes other animals
- Prey: an animal that is hunted or consumed

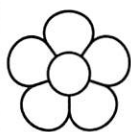
FOOD CHAIN

Create a food chain using the pictures below

--	--	--	--	--



Snake



Flower



Bird



Butterfly

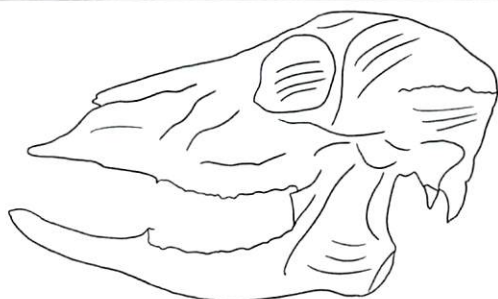


Sun

Draw your own food chain with different animals:

SKULLS & PELTS

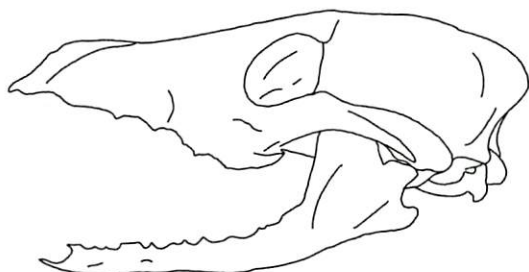
Draw teeth to complete the skull



Herbivore



Omnivore



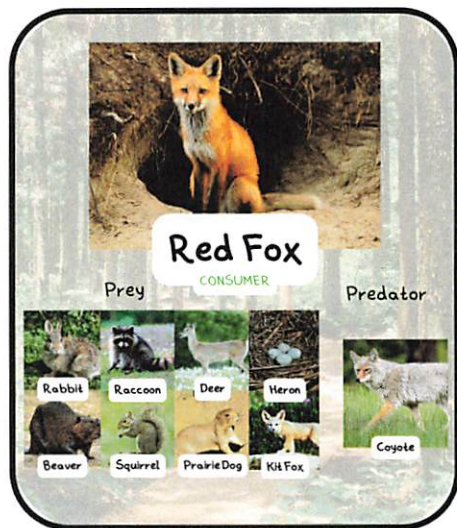
Carnivore

What are the functions of an animal's pelt?

Which pelts do you think are the most similar and why?

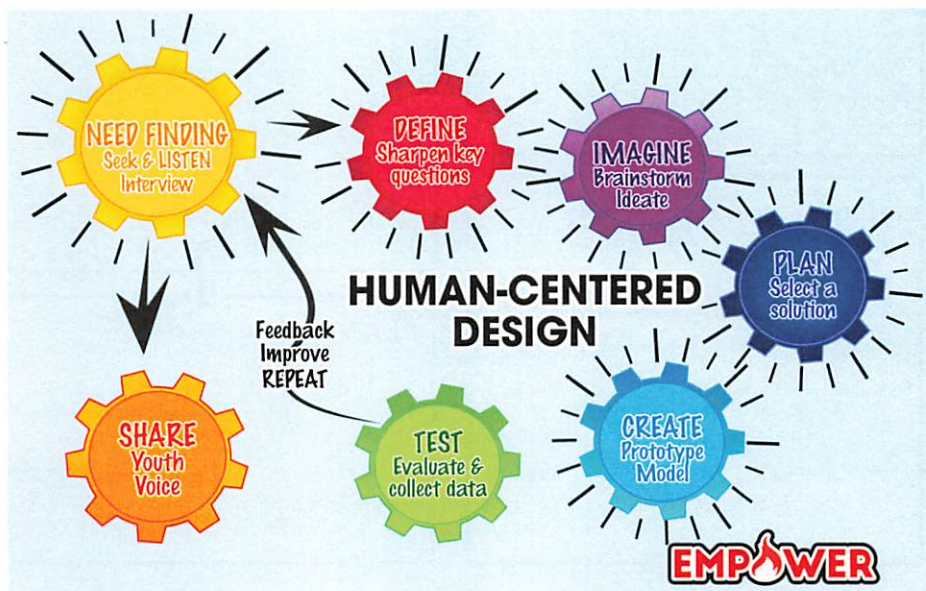
How to Build the Food Web Game

We created this food web game using the Oklahoma Department of Wildlife Conservation's field guide to select native animals found in local wetland, prairie, and forest habitats. The game includes producers, consumers, and sunlight to show how energy moves through an ecosystem. Each student wears an organism card on a lanyard and takes on the role of that plant or animal. Using short ropes, students connect themselves to organisms they consume or organisms that consume them, gradually building a large, interactive food web. This hands-on model helps students visualize feeding relationships, recognize that ecosystems are made of interconnected parts, and understand how a change to one organism can affect the rest of the system.



REFLECTIONS

answers for crossword

[illegible]



DESIGN THINKING



Engineer solutions that people and communities need

Need / Problem:

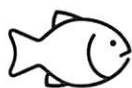
Explain:

Define:

Create: Draw a Prototype / Model

Imagine: Brainstorm

PLAN: Materials Needed



AQUAPONICS



Circle the elements that you will find in an Aquaponics system.
Put an X through elements that may harm the ecosystem.

6

C

Carbon
12.011

92

U

Uranium
238.0289

8

O

Oxygen
15.9994

17

Cl

Chlorine
35.4527

1

H

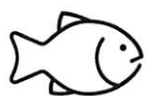
Hydrogen
1.0079

7

N

Nitrogen
14.00674

Draw or list the four things all living ecosystems need to survive.



AQUAPONICS



Label the Aquaponic System

WORD BANK

Pump

Leaf

Filter

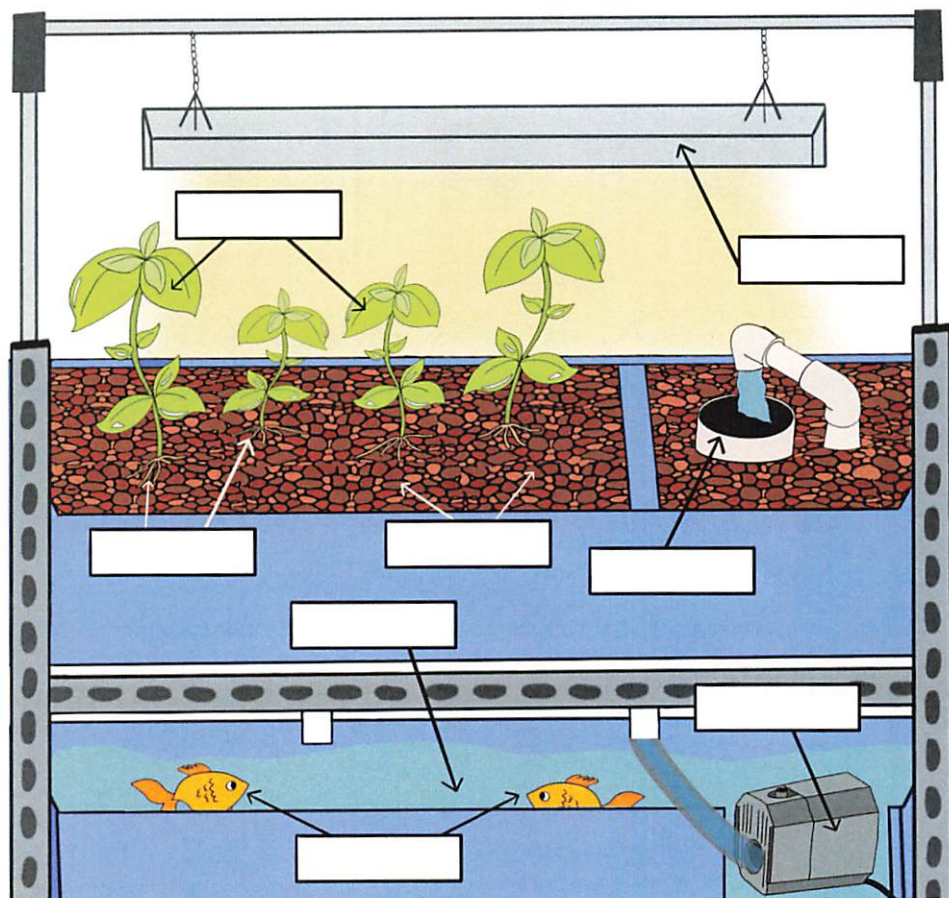
Water

Fish

Roots

Media

Light





Aquaponics + Design Thinking

- **K.LS1.1** – Identify what plants and animals need to survive.
- **K.ESS3.1** – Model how living things depend on their habitat.
- **2.LS2.1** – Investigate how water and sunlight affect plant growth.
- **5.LS1.1** – Explain how plants get materials from air and water.
- **5.LS2.1** – Model how matter moves through an ecosystem.
- **5.LS2.2** – Predict what may disrupt ecosystem stability.
- **7.LS2.3** – Model matter cycling and energy flow in a system.
- **K-2 ETS** – Ask questions, make models, and test simple solutions.
- **3-5 ETS** – Define problems, compare ideas, test, and improve designs.
- **6-8 ETS** – Use criteria, constraints, and data to optimize designs.

Pollinators

- **K.LS1.1** – Identify what pollinators need to survive.
- **K.ESS3.1** – Show how pollinators depend on their habitat.
- **1.LS1.1** – Explore how pollinator body parts help them survive.
- **2.LS2.2** – Model how animals move pollen between flowers.
- **3.LS1.1** – Compare pollinator life cycles.
- **3.LS2.1** – Explain how bee colony behaviors support survival.
- **4.LS1.1** – Connect flower and pollinator structures to their functions.
- **5.LS2.2** – Predict how ecosystem changes affect pollinators.
- **7.LS2.2** – Describe interactions between pollinators and plants.
- **7.LS2.4** – Explain how environmental changes affect populations.

Skulls & Pelts + Food Web Game

- **PK.S.2** – Observe and describe animal structures.
- **PK.S.3** – Compare similarities and differences among animals.
- **K.LS1.1** – Connect animal structures to survival needs.
- **3.LS3.1** – Compare inherited traits and variations.
- **3.LS4.2** – Explain how traits may help animals survive.
- **4.LS1.1** – Connect animal structures to their functions.
- **5.LS2.1** – Model producers, consumers, and decomposers.
- **5.LS2.2** – Predict how changes affect a food web.
- **7.LS2.1** – Explain how resource availability affects populations.
- **7.LS2.2** – Describe interactions among organisms.
- **7.LS2.3** – Model energy flow and matter cycling.
- **7.LS2.4** – Explain how ecosystem changes affect populations.

LEAVE NO TRACE

SEVEN PRINCIPLES

The 7 Principles of Leave No Trace teach us how to take care of nature so plants, animals, and the environment stay safe and beautiful for everyone to enjoy now and in the future!

PLAN AHEAD AND PREPARE

Have a plan and pack the 10 essentials

TRAVEL AND CAMP ON DURABLE SURFACES

Stick to trails and camp at established sites

DISPOSE OF WASTE PROPERLY

Take your trash and bury your poop

RESPECT WILDLIFE

Don't feed wild animals and observe at a distance

LEAVE WHAT YOU FIND

Take only pictures and leave only footprints

BE CONSIDERATE OF OTHER VISITORS

Yield to other hikers and avoid loud noises

MINIMIZE CAMPFIRE IMPACTS

Only where permitted and destroy any trace

Which of the 7 "Leave-No-Trace" principles did you use today, and how did you follow it?



OUTDOOR CLASSROOM TULSA

CURIOSITY • HANDS-ON • LIFE SKILLS

CROSSWORD

Nocturnal Creatures in Mohawk Park

Down



1



2



3



5



7



8



1



4



6

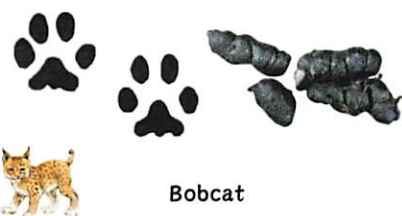
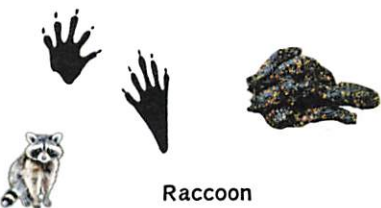
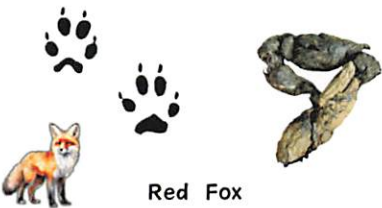
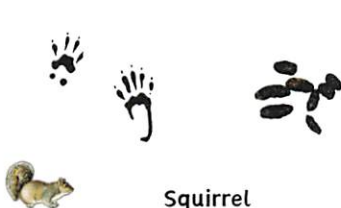


8

Across

SCAT & TRACKS

Animal signs are everywhere in nature!

 Armadoillo	 Barred Owl
 Bobcat	 Coyote
 Raccoon	 Red Fox
 Squirrel	 Striped Skunk
 Virginia Opossum	 White -Tailed Deer

Scavenger Hunt

Base Camp – Mohawk

	3 Different Types of Leaves 
	A Tree Stump 
	A Wasp Nest 
	5 Squirrels 
	A Bird's Nest 

	4 Fish 
	A Pollinator 
	A Bridge 
	3 Different Types of Seeds 
	Evidence of a Deer 

	A Tick 
	Animal Scat 
	Animal Tracks 
	4 Birds 
	A Decomposer 

OUR MISSION

To positively affect communities from the kids up,
by empowering innovators with
STEM/Life Skill habits through repetitive
exploration of a natural living laboratory.



OUTDOOR CLASSROOM TULSA

CURIOSITY • HANDS-ON • LIFE SKILLS

OutdoorClassroom.org

Outdoor Classroom - Tulsa

4218 Choctaw Drive, Tulsa, OK 74115

Mailing Address:

P.O. Box 52826, Tulsa, OK 74152



CHARLES AND LYNN
Schusterman
FAMILY PHILANTHROPIES



OPPORTUNITY
PROJECT
Constructing Years in the Name of Opportunity



TULSA PARKS



Tulsa Regional
STEM Alliance

EXPLORE ENGAGE EMPOWER



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