# Starved Rock State Park

K-2nd Grade Teacher Resource Packet

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# Time to Plan a Field Trip!

# **Starved Rock State Park Field Trip**

Thank you for your interest in Starved Rock State Park. The following is a packet of materials intended to assist educators before, during, and after a visit to Starved Rock State Park.

#### Steps for a Successful Field Trip!

#### 1. Complete an Activity Permit

www.dnr.illinois.gov/parks/interpret/park.starvedrock.html

- Required from all groups of 20 or more people.
- 2. Acquire Proof of Liability Insurance from School/Organization or Complete Release of Liability Form.

www.dnr.illinois.gov/parks/interpret/park.starvedrock.html

• Required from all groups of 20 or more people.

#### 3. Complete Program Request Form

www.dnr.illinois.gov/parks/interpret/park.starvedrock.html

• Only when asking for an interpretive/educational hike from park staff.

#### 4. Review the IDNR-Starved Rock Webpage

www.dnr.illinois.gov/parks/interpret/park.starvedrock.html

• View trail suggestions, park history videos, maps, hours, rules and regulations before you head out for your visit.

#### 5. Review IDNR Kids for Education Webpage and Reserve an IDNR Resource Trunk

www.dnr.illinois.gov/education/atoz.html

- Review website to view trunk materials and who to contact to reserve a trunk near your location.
- Natural Resource Coordinator Suggestions: People of Illinois Past Field Trip Backpack Mammals of Illinois

#### 6. Utilize the worksheets and tips included in the following Teacher Resource Packet!

#### **Illinois State Standards**

- SS.K-2.IS.3 SS.1.H.2
- SS.K-2.IS.2 SS.1.H.3
- SS.K.H.1 SS.2.G.2
- SS.1.G.2 SS.2.G.3
- SS.1.G.3 SS.2.H.1
- SS.1.H.1 SS.2.H.2

#### **Next Generation Science Standards**

- K-ESS3-1 1-LS3-1
  K-ESS2-2 2-LS4-1
- K-ESS3-3 2-ESS1-1
- K-LS1-1 2-ESS2-2
- K-2-ETS1-1 2-ESS2-3
- 1-LS1-1

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# **Starved Rock State Park Vocabulary**

**Amphibian**-Amphibians are cold-blooded vertebrates (vertebrates have backbones) that don't have scales. They live part of their lives in water and part on land (frogs, toads, and salamanders)

**Beaver**-Beavers are animals known for their building skills. They use branches, stones, and mud to build structures called dams. A dam stretches across a stream and blocks the flow of water. This creates a large pond. Beavers build their homes in the still waters of these ponds rather than in rushing streams.

**Bird**-Birds are animals that have a skeleton, covered in feathers, have wings, and beaks. Most birds are able to fly, but some (like ostriches and penguins) cannot fly even though they still have wings.

**Canyon**-A canyon is a narrow, deep valley cut by water through rock. They have very steep sides and may be thousands of feet deep.

**Culture**-A culture is a group of people that live or lived in an area that shares the same things in common like the tools they use, ways of making things, art, design, language, homes, ideas, and history.

**Earthworm-**Earthworms are smooth-skinned worms, with a body made of many small segments. Each segment has stiff little hairs that help the worm move, sometimes the hairs are hard to see. They have no skeleton, but do have lots of muscles. They live in soil and under the ground.

**Explorer**-European explorers worked for countries like France, England, and Spain and explored the land we call the United States today. They met others who already lived on the land such as various Native American groups like the Illinois.

**Fish**-Animals with a backbone that live in water. Covered in scales, breathe through gills, and have no limbs but move by swimming with the use of fins.

Forest-A large area filled with many trees is called a forest. Forests grow in almost every part of the world.

**French Voyageur**-Voyageurs were men from France who came to Canada and had settled and began farming. Voyageurs helped haul trade goods such as animal furs from outpost to outpost along the Great Lakes and riverways in North America including what is today's state of Illinois. They used their job as a voyageur to earn extra money and expand their farms, which would bring their families more goods to sell and use for their livelihood.

**Glacier**-Glaciers are huge, thick sheets of ice. They form when lots of snow falls in one location for many years. Over time the snow on the bottom gets squished down by the weight of falling new snow. This packed snow becomes ice, forming a glacier.

**Habitat**-A habitat is the place where living things naturally live and grow. Habitats provide them with the food, water and shelter they need to live.



Starved Rock Visitor Center-Northern Cardinal state bird of Illinois.

**Illinois Confederation**-A group of 12 tribes that shared the same language, culture, and religion who lived throughout Wisconsin, Illinois, Iowa, Missouri, and Arkansas.

**Insect**-Insects are creatures that have bodies with three segments that are protected by a hard shell called an exoskeleton. They have three pairs of legs and a pair of antennae (ants, butterflies, mantids, bees, wasps, and beetles).

**Kaskaskia Tribe**-One of the 12 tribes that belonged to the Illinois Confederation. They once had a very large village called the Grand Village of the Kaskaskia across from where Starved Rock State Park is today along the Illinois River.

**Mammal**-An animal that has fur or hair, drinks milk from the mother, warm-blooded (creates it's own body heat), and has a skeleton/backbone.

**Native American**-Individuals that can trace their heritage/ancestry to the earliest tribes that have lived in the North America for thousands of years. Native Americans are also known as American Indians, First Americans, and Indigenous Americans. Tribes such as the Kaskaskia and Peoria lived in the area we now call Starved Rock State Park. They were once part of the Illinois Confederation that included 12 tribes/nations. Today they are part of the Greater Tribe of Peoria Indians in Oklahoma.

**Opossum**-Opossums. are marsupials, or animals that carry their young in a pouch. The Virginia, or common, opossum is the only marsupial found in North America. They are excellent climbers and have a big toe on each foot that looks like a thumb and is used for grasping. This is called an opposable thumb.

**Owl**-Owls are birds of prey, meaning that they hunt and eat animals. Unlike most other birds of prey, owls are active at night. Common types of owls in Illinois include barred and great horned owls. The barred owl lives in forests by water.

**Plant**-Plants are living things that grow from the soil and turn light from the Sun into food. Plants can be big giant trees or small, tiny patches of moss.

**Pond**-Ponds are small bodies of still, or not moving, fresh water that are surrounded by land. Fresh water means that there is no salt in the water like there is in the ocean.

**Prairie**-A prairie is a type of habitat with mostly grasses, but also flowering plants and occasional shrubs or isolated trees.

**Raccoon**-A small animal that is gray with a black-eyed mask, and bushy ringed tail, lives chiefly in trees, and is active at night eating insects, eggs, frogs, clams, berries, and more.

**Reptile**-Any group of cold-blooded air-breathing animals with a skeleton (as snakes, lizards, turtles, and alligators) that usually lay eggs and have skin covered with scales or bony plates.

**Sandstone**-Sandstone is made when sand is laid down in layers. Over time, these layers are squashed under more and more layers. Eventually, the layers are turned to rock. The sandstone at Starved Rock State Park was laid down from a sea 460 million years ago that once covered most of Illinois.

**Soil**-Soil is. a mixture of minerals and organic material that covers much of Earth's surface. Minerals are bits of rock, and organic material is the remains of living things that have died. Soil is not as solid as rock. It has many small spaces, called pores, that hold water and air.

**Squirrel**-Squirrels are rodents that have long bushy tails. They are excellent climbers and feast on acorns, hickory nuts, insects, bird eggs, and more. The squirrel family also includes groundhogs, prairie dogs, and chipmunks.

White-Tailed Deer-A deer is a large wild animal with hooves that eats grass, nuts, and leaves. A male deer usually has large, branching antlers.

**Wigwam**-A seasonal home used by the American Indians of the Great Lakes region and Eastern Woodlands usually having an arched frame of poles or young trees covered with bark, rush mats (plants called rushes that were dried and sewn together), or animal hides.

### **Classroom Reading Suggestions:**

Illinois Native American, by Carole Marsh What's Your Habitat? By Sarah Leidhold Big Tracks, Little Tracks, by Millicent Selsam Can You Track It? By Maggie Felsch Trees, Leaves, and Bark, by Diane Burns

Kaskaskia Canyon—White-Tailed Deer, state mammal of Illinois.



# **Starved Rock State Park Wildlife**

Where are all of the animals? When visiting Starved Rock State Park with students you may get this question once or twice. The park has a variety of wildlife from fish, turtles, snakes, birds, foxes, skunks, raccoons and more. Some animals sleep during the day and are active at night while others are active during the day but may be well hidden from our site. Animals are busy hunting for food, eating food for energy, building homes such as nests, caring for young, or protecting themselves from danger. You can find signs or evidence (clues) that animals are living in the area.

#### Activity

• While on a hike with students ask them to use their senses to look for wildlife.

-Sense of smell. Can they smell wildlife in the area? Some wildlife like mammals that have hair or fur will give off a musky smell to mark their territory, attract a mate, or protect themselves like the spray of a skunk.

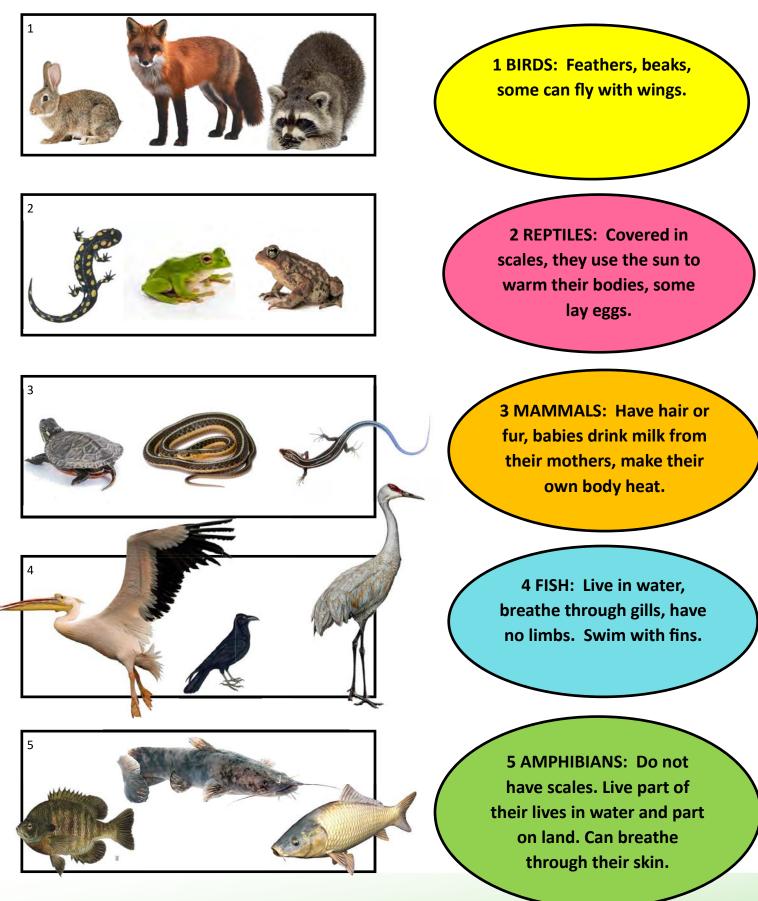
-Sense of sight. Ask students to look up, down, and all around as they are hiking for clues of animal activity like pieces of fur, dropped feathers, holes in trees made by woodpeckers, birds flying in the sky, a chipmunk or squirrel scurrying on the forest floor, animal tracks, or a bee buzzing by.

-Sense of hearing. Students should keep their ears wide open while on the trail for the sounds of nature such as bird calls, barks from squirrels or chipmunks, clucks from turkeys, and the splash of a beaver or fish in the river.

• Print off the following page for students to help them learn the different classes of animals in the animal kingdom.



# What are we? Match the group of animals to their animal class.

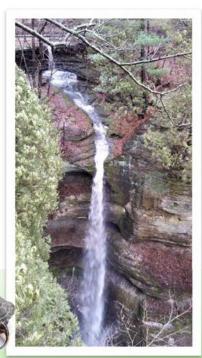


# **Starved Rock State Park Wildlife**

What is a habitat? A habitat is a home for a plant or animal. Wildlife or animals that live in the wild have habitat needs such as food, water, shelter, and space to raise their young. Animals that are pets have those items provided for them by their human owners. There are several habitats found throughout Starved Rock State Park including an oak-hickory forest, the Illinois River, floodplains and wetlands along the river, sandstone canyons and bluffs, and a tallgrass prairie.

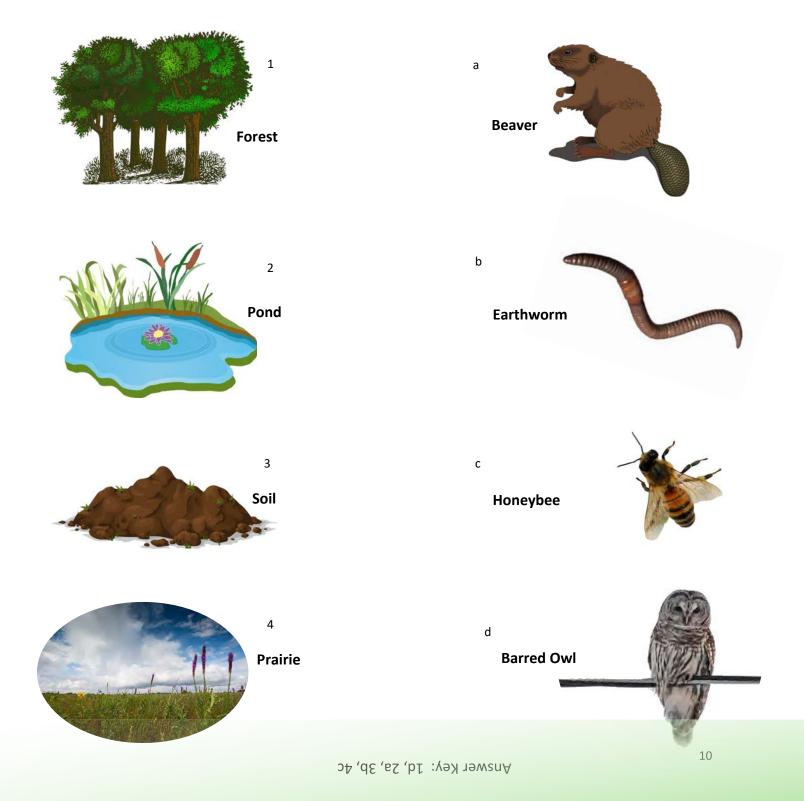
#### Activity

- Hike along the trails with your students to view the different habitats found at the park. Look for nests in trees, holes in trees, holes in the ground, turn over a log next to the trail, holes in canyon walls, fish jumping in the river, etc.
- Remember to respect wildlife and their homes by staying on marked trails and observe wildlife in action from a distance.
- Pay a visit to the park's visitor center to view the various animal mounts, furs, skulls, tracks, and scat or reserve the IDNR Mammal Resource Trunk for the classroom.
- Print off the student activity worksheet on the following page-Habitat Match Up.



Wildcat Canyon –Painted Turtle, state reptile of Illinois.

# Draw a line from the habitat on left to the animal that lives in that habitat on the right.



# Starved Rock State Park Wildlife

Some animals come out only at night and are called nocturnal while other animals are active during the day and are called diurnal. Some like to come out right before the sunrises and right before the sun sets and are called crepuscular. How do we know if an animal has been out and about if we don't see the animal with our own eyes? We look for animal signs such as animal tracks in the snow, mud, or sand at Starved Rock State Park. Animal homes such as holes, dens, hollows in trees, and nests in branches are also signs of animal activity at the park.

## Activity

- Look for animal tracks along the trails while hiking at Starved Rock but remember to keep your distance and be respectful of all wildlife you encounter.
- Print off the following student activity sheet on animal tracks.

White-Tailed Deer: hoof like tracks in the shape of an upside down heart.

**Raccoon:** small handprints with five fingers and tiny claw prints at the tips.

**Gray Squirrel:** Tiny handprints in front of larger footprints. Long fingers and toes with claw prints at the end.

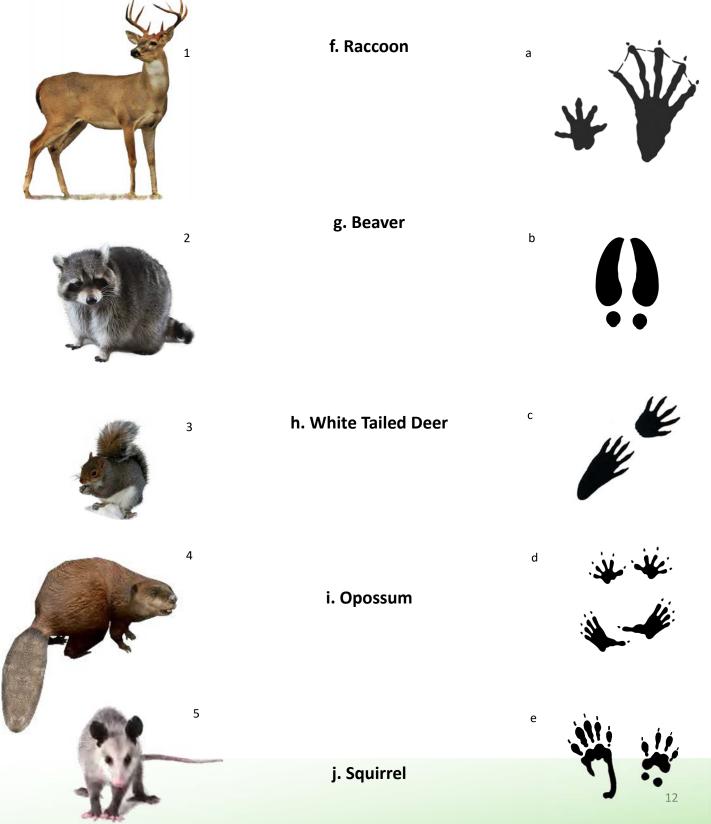
**North American Beaver:** Webbed feet where the toes are connected by skin to help the beaver swim. Front paws will look like small handprints with five fingers.

**Virginia Opossum:** Handprints with five fingers and footprints with an extended big toe that looks more like a thumb to help it climb and grasp on to branches.



LaSalle Canyon-Eastern Tiger Salamander, state amphibian of Illinois.

# Match the animal to its name, then match the name to the animal's track.



Answer Key: 1hb, 2fc, 3je, 4ga, 5id

# **Starved Rock State Park Plants and Trees**

Many types of plants, flowers, and trees grow at Starved Rock State Park. Plants, trees, and wildlife were important to the Native American Indians that once lived in the area. The Kaskaskia people were a Native American tribe that belonged to a larger group called the Illinois People. The Grand Village of the Kaskaskia was a large village that once existed across the river from where Starved Rock State Park sits today.

Large grocery stores didn't exist in the 1600s when the Kaskaskia lived along the Illinois river. The woods, wetlands, river, and prairie were their grocery store. They found food from nuts, berries, roots of plants, and wildlife. They made medicine from plants too. Shells from the river tied to sticks made spoons and clay from the earth made bowls and pots while rocks were turned into arrowheads, axes, and knives.

#### Activity

- Hike along the trail with your students and collect different shapes of leaves using the pictures below. Leaf collection is allowed as long as visitors stay on marked trails and do not remove any living plants, leaves, flowers, or wildlife from the park.
- Discuss the importance of trees: wildlife homes, food for wildlife, used by humans to build homes, burn in campfires or fireplaces for warmth, paper, toilet paper, furniture, pencils, baseball bats etc.
- Ask students to design the perfect tree by using the space on the following page. Ask them to think about the wildlife living in the tree (under the roots, inside the trunk, on the branches). Ask them to create their own leaf shape, berries, flowers, and nuts or pinecones on the tree.
- Print off the following 6 leaf shapes for students to color and use as a fun scavenger hunt along the park trails during your visit.

St. Louis Canyon-Monarch Butterfly, state insect of Illinois.

# My Tree!

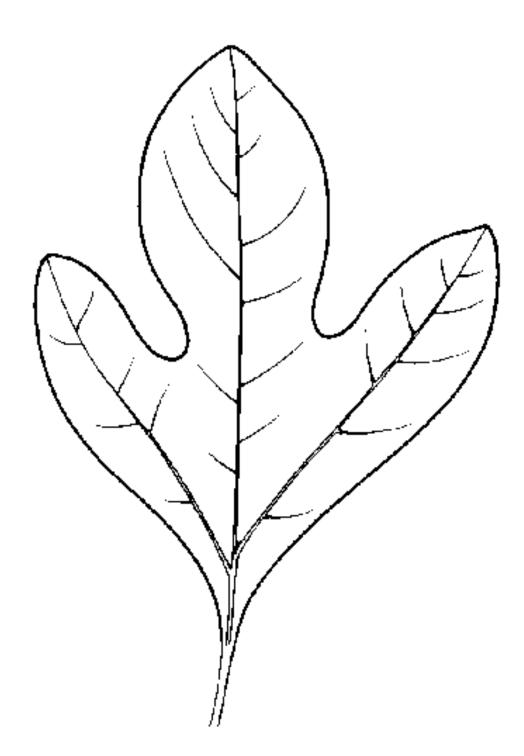
Draw and color your own tree. Make your own leaf shapes on the branches. Add wildlife living inside the tree, on the branches, or under the roots. Does your tree have berries, flowers, nuts, pinecones, or seeds?





# **SYCAMORE**

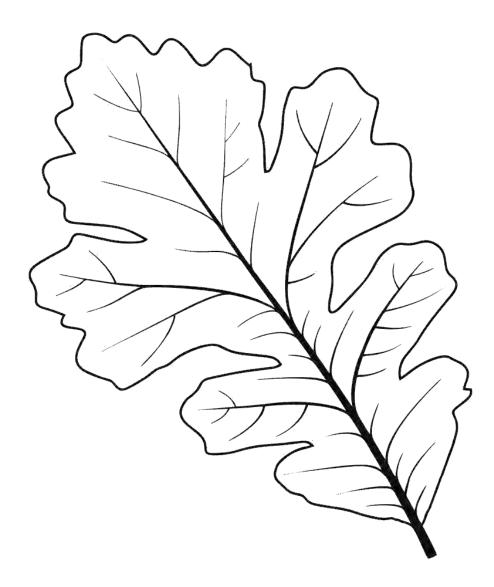
- Sycamores can easily live to 200 years old and grow up to 160 feet tall.
- A sycamore tree can grow 4 to 6 feet in a year!
- Look for their camouflaged and flaky bark in the picnic area along the river by the Starved Rock Visitor Center.



# Fun Fact:

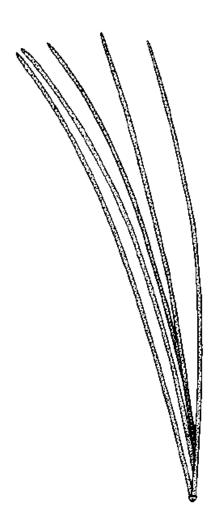
**SASSAFRAS** 

- Sassafras branches, roots, and leaves are edible. •
- They are used to flavor various soups and dishes. •
- Native Americans once used the tree to make medicine. •
- 3 different leaf shapes: dinosaur track (above) oval, and a mitten. •
- Hike to the bottom staircase after Eagle Cliff Overlook to find sassafras growing along the • Red River trail from Eagle Cliff to LaSalle Canyon. Find a leaf on the ground in the fall and tear it to smell the citrus and spice scent! 16



# WHITE OAK

- Can grow up to 70 feet tall and 500 years old!
- Oaks are used for furniture and building materials as well as a valuable food source for wildlife.
- The White Oak is the state tree of Illinois.
- White oaks are found throughout the park and have large grey patches of bark on their trunks mixed in with the darker bark.



# **EASTERN WHITE PINE**

- The largest pine tree in northeast America
- Leaves are needle like in shape, soft, flexible, and bluish-green.
- White Pines will have 5 needles in a bundle attached along the branch of the pine tree.
- Pinecones are a great source of food for wildlife.
- Two white pines are situated right below Starved Rock on the trail.



- Can grow up to 100 feet tall and live to 350 years old!
- The tree is named for its shaggy looking bark that curls in large sections on the tree trunk.
- Hickory nuts are edible and are a great food source for wildlife.
- Shagbark hickory trees can be found in the wooded areas on the Brown Bluff trails at the park such as the trail leading out to Wildcat Canyon.



# EASTERN COTTONWOOD

- The tree is named for the white and fluffy seeds it produces in the late spring that float on the air.
- The leaves look like hearts.
- You can find cottonwood trees growing along the Illinois River at the park on the Red River trail or along the picnic area down to the boat ramp.

# **Starved Rock State Park History**

The Kaskaskia lived in wigwams that looked like a hut made out of tree branches, bark, and plants called reeds. Animal furs were used for doors, rugs, and blankets. The women of the tribe cooked, planted crops such as beans, corn, and squash, cared for the family, made clothing from animal fur, and built their families wigwam.

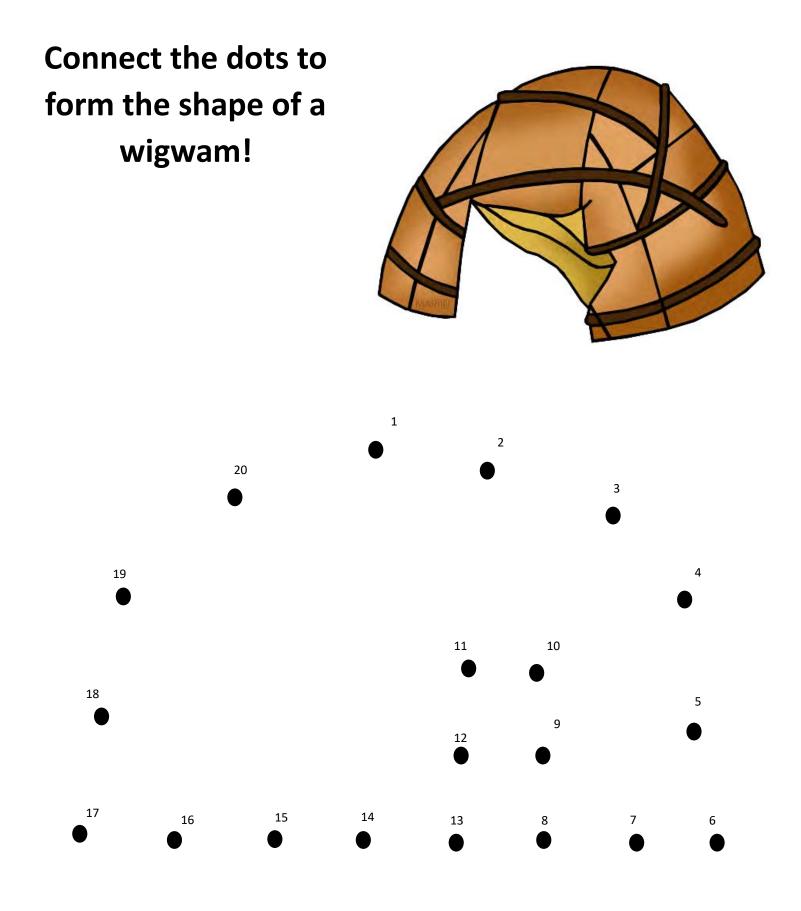
The men of the village were hunters and would go on the summer long bison hunt. Other animals such as wolf, cougar, otter, beaver, elk, deer, turkey, duck, goose, and fish were also caught for food and clothing.

Children in the Kaskaskia tribe you would help gather nuts from trees, plants, plant roots, and fruit and berries from the land for their family. Do you have chores or responsibilities at home?

#### Activity

- Hike to the top of Starved Rock with your group. From the 2nd deck look to your right/East across the river. Just past the yellow building ,stretches the land that once contained the Grand Village of the Kaskaskia.
- Read over the interpretive panels at each deck/stop on top of the "Rock".
- Visit the Visitor Center and view a replica of a wigwam and the Kaskaskia village.
- Print off the connect the dot activity on the following page for each student to work on either before the field trip or as a post field trip activity.







Louis Jolliet, an explorer from France and his crew of voyageurs traveled from Canada south through the Great Lakes, Mississippi River, and Illinois River in 1673, 350 years ago! They met the Kaskaskia tribe along the Illinois River across from today's Starved Rock State Park. They traveled by canoe exploring the land for gold, silver, transportation routes for trade, timber, and more for the country of France.

# **Starved Rock State Park History**

Henri Tonti and Robert LaSalle built a French fort on top of Starved Rock in 1683. Fort St. Louis was used as a center to trade with the local Native American tribes like the Kaskaskia. They would trade animal furs such as beaver, elk, wolf, bear, and otter with the French, and in return, the French would give them metal items such as axes, pots, knives, guns, blankets, and arrowheads. Metal lasted longer than the stone arrowheads and axes or pots made from clay. Have you ever traded with a friend? Maybe you traded for a sticker, snack, candy, a card, or a pencil?



#### Activity

• View the exhibits inside the Visitor Center of Louis Jolliet, Father Jacque Marquette, the Chief of the Kaskaskia tribe, a French voyageur with canoe, and a replication of Fort St. Louis.

• Hike to the top of Starved Rock and read over the interpretive panels with pictures of Fort St. Louis, the Illinois People, and the Legend of Starved Rock.

- Print off the coloring page to the left for students as a pre-visit or post-visit activity.
- Visit the Visitor Center where you can feel a real beaver pelt in the exhibit hall on the French voyageurs canoe. They have two types of hair: a long guard hair that is waterproof since they live in and out of the water and a shorter, softer hair close to the skin to keep them warm in winter. The French wanted to trade for beaver pelts to turn them into warm winter coats and hats.
- Take a hike on the Red River trail and look along the creek crossings in the mud and sand for beaver chews which are trunks of trees and branches chewed at one end. Look for tracks, and slides on the bank into the river.



# **Starved Rock State Park Canyons and Bluffs**

Sandstone is a type of rock formed from sand that has hardened over time. Every canyon, overlook, and bluff at Starved Rock State Park is made of St. Peter Sandstone. St. Peter Sandstone is very fragile and can be easily broken apart which is why the top of the canyons and overlooks like Starved Rock are protected by a wooden decking. This is also the reason why visitors are not allowed to go off of the marked trails, climb rocks or canyon walls, or carve into the sandstone.

Where did all of the sand come from? Over 460 million years ago what we know of as the State of Illinois was located south of the equator close to where South America is today. It was located next to a shallow sea and over millions of years the waves from the sea washed sand up onto the shore. The weight of each layer of sand over millions of years pressed down on the layer before it and the pressure of each layer of sand caused it to harden into a rock-sandstone.

#### Activity

- Take a hike out to one of the 8 canyons at the park to take a closer look at the various levels of sandstone or the ancient shoreline from 460 million years ago! Ask to borrow the Field Trip Backpack that contains magnifying lenses so students can take a closer look at the sandstone particles.
- Ask students to gently touch the sandstone walls of a canyon.
- What colors do you see in the sandstone? Ask students to look and answer.
  - -The orange color comes from the mineral iron as it travels through the sandstone in water. Once it reaches the surface the oxygen in the air makes it turn orange –iron oxide or rust!
  - -Can students see any sparkles in the sandstone? That is another mineral called quartz.
  - -The green color found in the sandstone comes from plant materials like moss.
- As students to draw a picture of a canyon after their field trip.
- Try the following sandstone experiment in the classroom before or after your scheduled park visit.

# **Starved Rock State Park Canyons and Bluffs**

#### **Making Sandstone Activity-45 minutes**

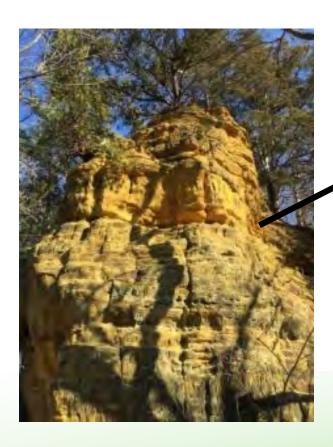
Sedimentary rocks, including sandstone, are packed together in layers. Water containing minerals seeps in between the pieces and then evaporates. The minerals that are left behind cement the particles together into a larger rock.

You will need:

- paper cup
- cementing solution (2 parts water to one part Epsom salt)
- sand
- hand lens

Instructions:

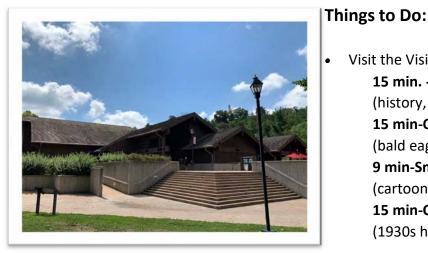
- 1. Fill the paper cup half full of sand. Pack the sand with your hand.
- 2. Slowly add cementing solution until all of the sand is wet.
- 3. Put the cup in a warm place until the sand dries completely.
- 4. Carefully tear away the paper cup.
- 5. Observe the sand with the hand lens.





*St. Peter Sandstone on brown marked Bluff trail above St. Louis Canyon.* 

# **Starved Rock State Park Area Activities**



- Visit the Visitor Center and watch a short film. **15 min. -In the Shadow of the Rock** (history, geology, and ecology of the park) **15 min-On the Wings of the Wind** (bald eagles) **9 min-Smokey the Bear and Friends** (cartoon for kids) **15 min-Civilian Conservation Corps** (1930s history at the park)
- View the exhibits in the Visitor Center that detail the park's history, geology, and ecology.
- Reserve an IDNR Resource Trunk ahead of time with the Natural Resource Coordinator (lisa.sons@illinois.gov) and use the trunk materials in class before the visit or reserve the Eagle's Roost Cabin located behind the Visitor Center for a classroom on-site and location for lunch.
- Ask for a Junior Ranger booklet at the front desk of the Visitor Center. Complete at least 5 out of the 9 activities by viewing the Visitor Center exhibits, maps, and hiking a trail and earn a Junior Ranger badge and prize. Schedule booklets ahead of time if you have a large group by contacting Lisa Sons at lisa.sons@illinois.gov

#### Things to See and Places to Visit:

- Visit the bison at Buffalo Rock State Park located North of Starved Rock across the Illinois River on Dee Bennett Rd. Hike the prairie and woodland trails along the bluffs of the river.
- Schedule a visit to the Illinois Waterway Visitor Center operated by the U.S. Army Corps of Engineers. View exhibits or engage in a Ranger-led program about the Illinois Waterway, Illinois River, and the Starved Rock Lock and Dam.
- Schedule a visit with the LaSalle Historical Society and Museum in downtown Utica.



- View the historical Starved Rock Lodge on the bluff behind the Visitor Center. Hike the sidewalk around the Lodge to view the wood carvings and sculptures.
- Visit the Canal Corridor Association on Route 351 and 1st Street in LaSalle to view the Illinois and Michigan Canal, schedule a tour on the historic mid-19th century tour boat and meet the mules!

Visit www.dnr.illinois.gov to view state parks by region under the Parks and Recreation tab. Read over the trail maps, trail suggestions, rules and regulations (stay on marked trails), and head out with your group to explore and learn in nature! Here are some recommended trails for youth at Starved Rock State Park. Please ensure you have at least 1 adult for every 5-8 children (ages up through high school). Happy Hikers=Happy Trails!

