Starved Rock State Park

6-8th Grade Teacher Resource Packet

Time to Plan a Field Trip!

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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 the 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. **Prepare for a safe and successful day** at the park for all, by reminding students and parents to: dress for the weather, wear proper trail footwear, eat a good breakfast, and bring a bottle of water.

6. **Review the IDNR Kids for Education Webpage and Reserve an IDNR Resource Trunk**
www.dnr.illinois.gov/education/atoz.html
- Review the website to view trunk materials and who to contact to reserve a trunk near your location.

7. **Utilize the worksheets and tips included in the following Teacher Resource Packet** (pre-visit, visit, or even post-visit)!

8. **Stop in at the Starved Rock Visitor Center** to check out the amazing exhibits and displays about the park or request one of the 15-minute films on the park such as “In the Shadow of the Rock.”

Starved Rock State Park

Starved Rock State Park is known for its sandstone canyons and cliffs along the Illinois River in North Central Illinois. 13 miles of hiking trails take visitors in and out of 9 canyons, such as Illinois, Ottawa, Kaskaskia, LaSalle, Tonti, Wildcat, French, Aurora, and St. Louis canyons and 7 overlooks like Eagle Cliff, Lovers Leap, Beehive, Sandstone Point, Starved Rock, and Hennepin Canyon overlooks. Visit the IDNR website to download trail maps and individual trail suggestions for your class visit to the park at https://www.dnr.illinois.gov/park/parks.starvedrock.html

Starved Rock

Ottawa Canyon

Kaskaskia Canyon

Lovers Leap

Eagle Cliff Overlook

French Canyon

LaSalle Canyon

Tonti Canyon

St. Louis Canyon

Aurora Canyon

Wildcat Canyon

Illinois Canyon

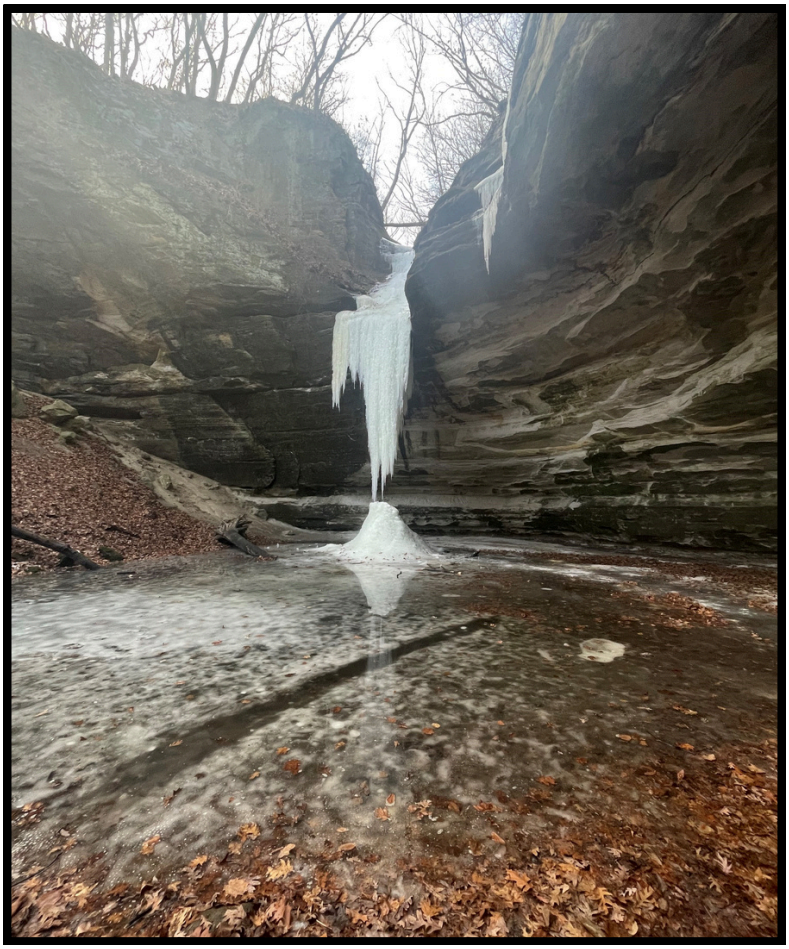
Starved Rock State Park
Geology

Pre-Visit

- Discuss the vocabulary list.
- Watch video series:
  - https://www.bing.com/videos/riverview/relatedvideo?q=illinois+geology+videos%27&mid=DB6F1B6C99D5EA6A5C6EDB6F1B6C99D5EA6A5C6E&FORM=VIRE
- Conduct suggested activities in the classroom.

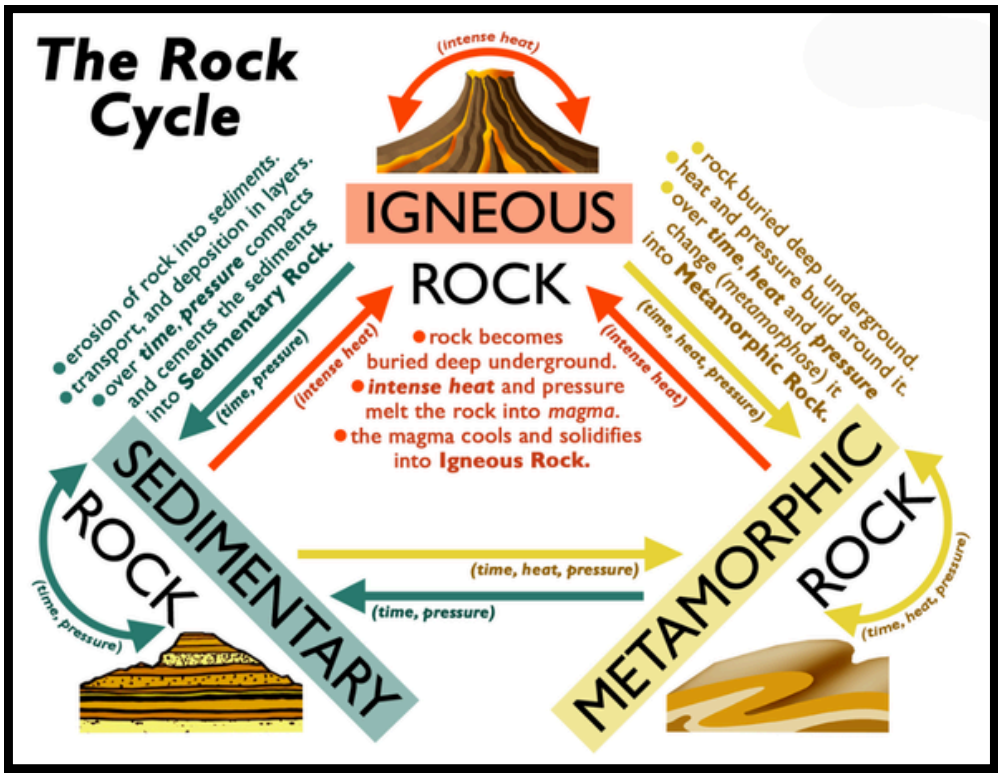
Visit

- Plan a hike into at least one of the 8 canyons along the Starved Rock State Park trail system, where the geological processes can be seen in the sandstone canyon walls.
  - Closest to the Visitor Center and main parking lot.
    - French Canyon
  - Wildcat Canyon
  - Other parking lots that can accommodate a school bus.
    - LaSalle Canyon
    - St. Louis Canyon
- Visit the Matthiessen Dells area at Matthiessen State Park, just 2 miles south of Starved Rock.
- Request the movie “In the Shadow of the Rock” at the Starved Rock Visitor Center.
- Go on a guided hike with one of the park’s seasonal naturalists in the fall or a full-time Natural Resource Coordinator in the winter and spring.



Starved Rock State Park
Geology

You should definitely find out some facts about rocks before visiting Starved Rock State Park! The park is named after a sandstone butte called Starved Rock! There are 18 canyons and 7 overlooks that make up the unique rock formations in the park, and they are all made of a special kind of sedimentary rock called St. Peter Sandstone.



The rock cycle is a key geological process that shows how rocks transform between three main types: igneous, sedimentary, and metamorphic.

Igneous Rocks
Formed from the solidification of magma or lava, igneous rocks can be intrusive (like granite) when cooled underground or extrusive (like basalt) when cooled on the surface. They initiate the rock cycle and can later be broken down into other rock types.

Sedimentary Rocks
Igneous rocks are weathered and eroded into smaller particles, which accumulate and compact into sedimentary rocks such as sandstone, limestone, and shale. These rocks often contain fossils and reveal Earth's history.

Metamorphic Rocks
Both igneous and sedimentary rocks can undergo metamorphism under heat and pressure, transforming into metamorphic rocks like schist, gneiss, and marble. These rocks can also be weathered, continuing the cycle.

The rock cycle is complex and interconnected; for example, sedimentary rocks can become metamorphic when buried, and metamorphic rocks can melt into magma, which can then cool into igneous rock.

Starved Rock State Park
Rock Cycle Activity

Snickers Bar Rocks Activity

Materials:

- 2 fun-size Snickers or 1 full-size Snickers
- Knife
- Plastic baggie
- Something heavy (I used a large textbook)
- Plate (paper means easy clean up)
- Microwave

Sedimentary Snickers

1. Use the knife to slice the Snickers bar in half.
2. Examine the different layers.
3. How many layers of (candy) sediment do you notice?

Metamorphic Snickers

Sedimentary rocks can turn to metamorphic rocks with the application of heat and pressure.

1. Put the sedimentary Snickers into a clear plastic baggie, remove the extra air, and seal it shut.
2. Place it on a firm surface, like a countertop, and place a heavy object on top. Apply as much pressure as possible.
3. After a minute or two of applying pressure, remove the heavy object and examine the model of the metamorphic Snickers.
4. What happened when the candy bar (rock) was placed under pressure?

Igneous Snickers

Metamorphic rock can transform into igneous rock if there is enough heat to melt the rock.

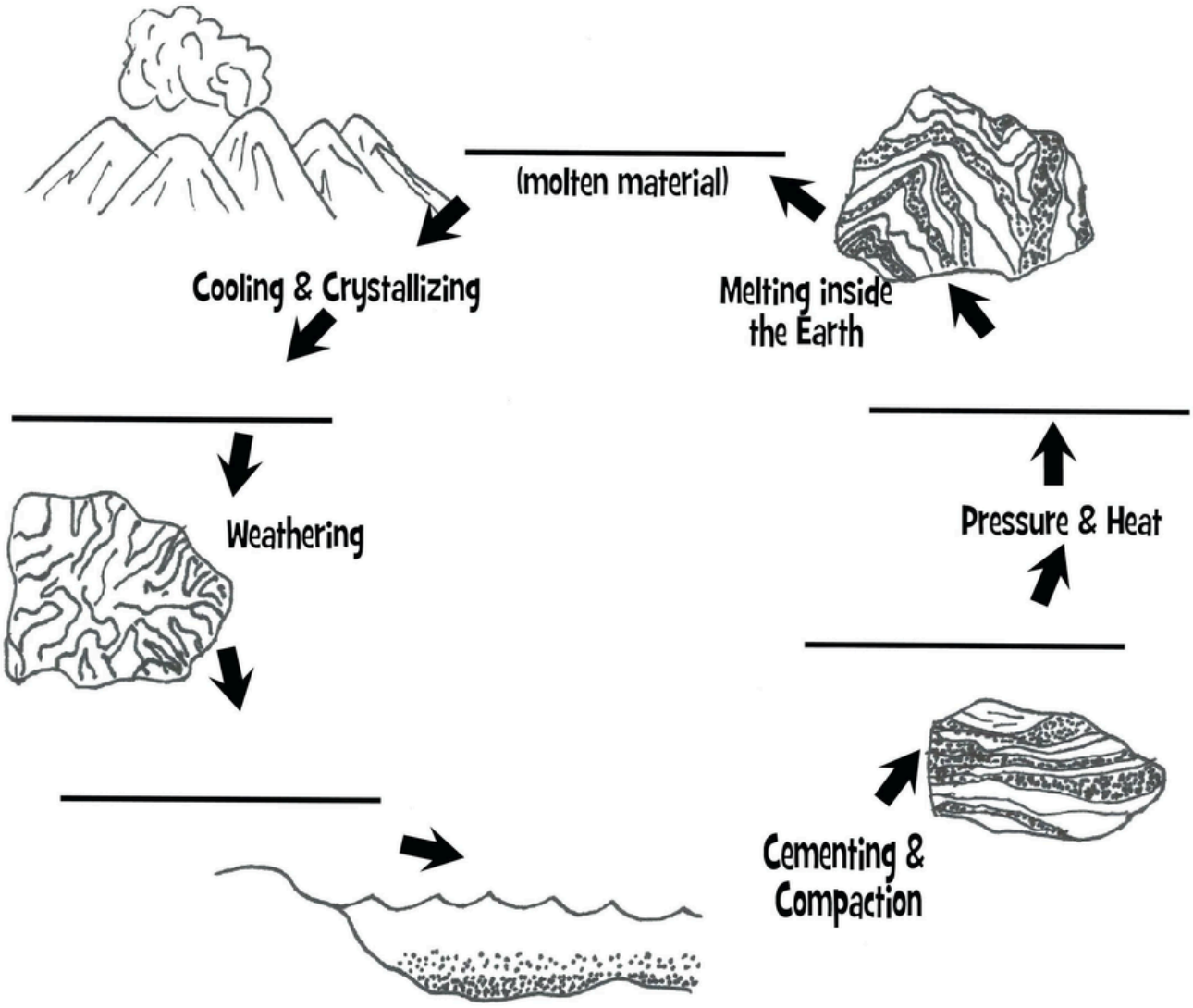
1. Take the metamorphic Snickers out of the plastic baggie and put it on a plate.
2. Put it in the microwave and microwave at 30-second intervals until the candy is melted.
3. Once the Snickers is melted, remove the plate from the microwave and let it cool. Once it is cool, examine the igneous rock model.
4. What happened when the metamorphic rock was placed under heat?

This piece of chocolate is used up and not great for eating anymore.

Starved Rock State Park
Rock Cycle Activity

Fill in the blanks to complete the rock cycle using these words:

metamorphic rock	igneous rock	sedimentary rock
magma	sediment	



Starved Rock State Park
Geology

Geology of Illinois

Illinois is rich in rock and mineral resources essential for various industries, including agriculture, construction, and energy. Beneath the surface, layers of soil, clay, silt, sand, and gravel cover the bedrock, with economic minerals found at varying depths. Coal is mined from up to 1,000 feet deep, while oil is extracted from porous rock layers at several thousand feet. Other minerals like lead, zinc, and limestone are found at shallower depths. Geologists use tools like geophysical logs and seismic surveys to study the state's geology through outcrops, quarries, and drilling.

Over billions of years, the geology of what is now Illinois has undergone significant transformations. The state's oldest rocks belong to the Precambrian basement complex, which remains largely concealed and poorly understood due to the limited number of deep drill holes that access them. These igneous and metamorphic rocks were exposed at the surface between one billion and 600 million years ago. During this time, particularly in the Cambrian Period, they underwent extensive weathering and erosion, coinciding with tectonic rifting in North America.

Around 543 to 323 million years ago, during the time from the Cambrian to the Mississippian Periods, the land stopped breaking apart and began to sink slowly. This sinking created room for a warm, shallow ocean to flow in from the south and southwest, covering what we now know as Illinois. The sands that settled in this ocean eventually turned into sandstone, like the St. Peter Sandstone that forms the park's canyons and overlooks today. At the same time, the remains of sea creatures such as shells, algae, and corals contributed to the formation of limestone. Today, only a few areas, like the very top of Illinois Canyon, still have limestone. Most of the limestone was removed during the last two glaciation periods that affected Illinois.

In Illinois, Mississippian rock layers can exceed 3,000 feet deep and contain oil and fluorspar. During the Pennsylvanian Period, between 323 and 290 million years ago, fluctuating oceans created deltas over the ocean floor, leading to the formation of vast swamps and thick peat layers. Over millions of years, this peat transformed into the coal beds found in Pennsylvanian rocks today, which are the source of all coal in Illinois. Additionally, these rocks contain significant deposits of limestone, shale, clay, sandstone, and some oil and gas.

Mineral Resources of Illinois

Coal

- occurs in and is mined from deltaic rocks (Pennsylvanian age) that occur at the bedrock surface throughout most of the southern three-fourths of the state
- uses: burned to make steam for generating electricity

Oil and Gas

- occur in and are produced from the ancient sandstones and limestones (Ordovician to Pennsylvanian age) in Illinois; occur as a fluid and gas in the pore spaces of the rocks
- uses: refined to make gasoline and motor oil; raw material for making plastics and thousands of other substances; heating source for homes and factories

Starved Rock State Park
Geology

Fluorite

- occurs in and was mined from marine rocks (Mississippian age) in southeastern-most Illinois (Hardin and Pope counties); The last Illinois fluorite mine closed in 1995 because of competition – fluorite can be mined less expensively in China. Illinois was the leading producer of fluorite in the United States for many years, and the mineral was named the official state mineral in 1965. ·
- uses: anhydrous ammonia fertilizer and many other chemicals; raw material for many chemicals; source of fluoride in toothpaste; flux for use in making aluminum, steel, glass, uranium, and ceramics; welding rod manufacture; used in "Freon" (chloro-fluoro-carbon chemicals) for refrigerators and air conditioners (manufacturing of some of these has been banned in the United States)

Lead and Zinc

- lead (galena, PbS) and zinc (sphalerite, ZnS) occur in marine rocks (Ordovician age) in northwestern Illinois (Jo Daviess County); these minerals were mined in small amounts before 1700. Smelting began in 1740. The last mine closed in 1973. These minerals were also mined with fluorspar (Mississippian age) in Hardin and Pope counties. Illinois was the leading state in lead production during the mid-1800s. Small amounts of silver have been recovered from the galena in Hardin County.
- uses of lead: automobile batteries; solder, seals and bearings, bullets, shotgun pellets, sinkers for fishing lines; leaded glass for TV picture tubes, radiation shielding uses of zinc: zinc-based alloys (e.g. brass and bronze); galvanizing and zinc-plating to prevent rust and corrosion of steel

Dolomite and Limestone

- found in marine rocks of all ages and mined when at or near the surface; quarries are common in northern Illinois, western and southern fringes of Illinois, and parts of eastern Illinois; dolomite and limestone quarries also found in scattered areas throughout central and southern Illinois. Illinois production ranks fifth among the states
- uses: aggregate for making concrete and asphalt; agricultural lime (finely ground) to neutralize soil acidity; scrubbers to trap sulfur in coal-burning power plants; ballast for building railroad beds; raw material for making cement and some chemicals

Industrial (Silica) Sand

- occurs in and is mined in Ogle and La Salle counties (Ordovician St. Peter Sandstone) and in dune sands (Quaternary) in Mason County; Illinois leads the nation in the production of industrial sand. Starved Rock State Park canyons and overlooks are comprised of St. Peter Sandstone.
- uses: raw material for making glass, computer chips, fiber optic cables for telecommunications, fiberglass for insulation, heat-resistant surface tiles on the space shuttle and molded parts of cars, trucks and boats; an abrasive (as a fine powder); filler and extender in paints, plastics, adhesives and rubber and in northeastern Illinois (Cook, Kane and Lake counties)

Starved Rock State Park
Core Sampling Activity

Core Sampling Activity

When we look for geologic resources, how do we do it? This lab allows students to explore taking a core sample, how core sampling can tell us about geologic history, and what resources are hiding in the earth.

A core sample is a long narrow piece of rock obtained by drilling into a rock with a special tool that lifts out an intact part of the rock. In-depth study of core samples requires a science lab full of equipment.
Have you ever wondered how scientists learn what a rock is made of, how it was formed, and when it was formed? In this activity, you'll make your own "rock" and then use simple tools to explore inside.

Materials:

- 3 or more colors of play dough OR soft clay
- Drinking straw OR plastic cylinder from a ball-point pen
- Piece of any sort of paper
- (Optional) toothpick OR thin stick OR chopstick
- (Optional) cake sprinkles
- (Optional) ground black pepper OR sand
- (Optional) plastic knife OR thick, card-like paper (junk mail works great)
- (Optional) magnifying glass

1. Choose one color of play dough that will make up most of your rock and cement your other rock pieces together. From the other colors of play dough, form pea-size and marble-size spheres of play dough to represent inclusions or material trapped inside a rock during its formation.

2. If you have cake sprinkles, ground pepper, or sand, mix some into one or more colors of play dough. Mix a lot into one or more small spheres of play dough until it becomes stiff and grainy, then form it into a cube – this will represent harder rocks.

3. Grab a chunk of your main color of play dough that will become the bottom of your rock. Flatten it onto the piece of paper. Add the spheres and cubes of other colors and chunks of the main color and press them all together to form a rock.

4. Cover your rock with the main color of play dough so it looks like the rock is one color. This represents the weathering on the surface.

5. If possible, trade your rock with another person, so you can investigate one that is unknown! If you can't trade with anyone, find a family member who didn't watch you make the rock and challenge them to do the next steps.

6. Cut a plastic straw into thirds or fourths or disassemble an old ballpoint pen and retain the straw-like cylinder.

Push an open end of the straw or cylinder straight down into the rock, all the way to the paper. Twist the straw or cylinder in place and lift out a sample. This is a core sample of your rock. Use a toothpick, chopstick or short stick to push your core sample out of the cylinder for inspection.

Starved Rock State Park
Core Sampling Activity

7. Examine your core sample. Can you see inclusions or layers underneath the surface of the rock?
Use your core sample to investigate how the rock formed over time and how many different materials it's made of. Compare the size and roundness of any inclusions in your core sample. The larger an inclusion, the closer to its source it is. Smaller inclusions will have traveled farther, perhaps in moving water or in a landslide or other geologic event. Rounder inclusions indicate a more active body of water that smoothed them during tumbling.

Repeat steps 6 and 7 several times. Think about the best places to collect samples so that you can get as much information about your rock as possible.

Use a magnifying glass to explore your core samples and a plastic knife or piece of thick paper to slice your cores into thin sections for study.

Questions

How many different types of rock inclusions are in the conglomerate?

Which color of rock makes up most of the rock? Which color makes up the least?

Are some inclusions or layers denser than others?

Which inclusions are farthest from their source?

Starved Rock State Park
Geology

How Glaciers Shape the Land

Starved Rock is mainly known today as a beautiful state park, but it also has a lot of prehistoric and historical significance. Around 600 million years ago, Northern Illinois was part of a large area that was being worn down by erosion. This erosion brought the land down to almost sea level, creating what is called a peneplain. Over time, this peneplain was covered by seawater multiple times, and layers of sediment built up on top. The rivers in the area were different from what we see now. There was a big river flowing north and south about 30 miles west of Starved Rock, and another major river flowing east and west about 90 miles to the south. The north-south river was an early version of the Mississippi River, while the east-west river was one of its smaller branches.

Starved Rock State Park used to be buried under 3,000 to 5,000 feet of glacial ice. This ice came from a continental glacier that moved into the area several times over the last 700,000 years, with the thickest parts estimated to be up to two miles deep. Glaciers can only move forward; they never go backward. When we say a glacier is retreating, it means it's melting faster than it's moving. If it's moving faster than it melts, it's advancing. If it's melting and moving at the same speed, it looks like it's standing still.

Glaciers form when winter snowfall exceeds summer melting. Over time, the accumulating snow compresses under its own weight, transforming into ice that flows outward. As temperatures rise, the ice melts, leading to a reduction in glacier size. Conversely, during colder periods, increased snowfall allows glaciers to expand. As they move, glaciers carry along rocks and soil frozen at their base, which acts like sandpaper, smoothing the terrain beneath them. This movement can flatten rock surfaces, round hills, and carve out valleys.

As glaciers advance, they gather rocks and transport them. When the ice melts, these rocks are left behind, referred to as drift. If a glacier halts its movement, this drift can accumulate into formations known as end moraines. After a glacier retreats, it leaves behind a series of uneven hills called end moraines, such as the Marseilles Moraine and the Farm Ridge Moraine, found near the Starved Rock area.

The melting glaciers released significant amounts of water, which collected behind the moraines and formed large lakes. One such lake led to the Kankakee Torrent when it broke through the Farm Ridge Moraine, flooding the region and shaping the Illinois Valley. The streams that emerged from these lakes were much larger than those present today and played a crucial role in forming the Illinois Valley and the canyons now found at Starved Rock State Park.

When glaciers melt, they deposit the materials they carried, including rocks and soil known as till. This till is ground up and released from the glacier's base. A notable indication that Illinois was once glaciated is the presence of large boulders and smaller rocks called erratics scattered throughout the area. These erratics are unique because they originate from distant locations. You can find glacier erratics along the bluff trail to Wildcat Canyon and near the boat ramp at Starved Rock State Park.

Starved Rock State Park
Glacier Activity

Mini-Glaciers Experiment

The Illinois Valley, along with the Illinois River and the sandstone canyons and overlooks found at Starved Rock, has been sculpted by the forces of water in both its liquid and solid states. This laboratory exercise aims to provide students with an opportunity to investigate the dynamics of glaciers and their significant role in shaping the landscape over time.

Materials needed by teachers:

- small plastic bowls (1 per student pair)
- gravel and sand (a handful per bowl)
- water Fill the bowl half full of water and throw in some sand and gravel. Freeze overnight.

The following day, throw more sand and gravel on top of the already frozen water and fill it again with water to freeze once more to create a mini glacier for each group of students.

Materials needed by students:

- A “mini glacier” (pre-made by the teacher)
- A thick layer of clay (about the length and width of a brick)
- A brick (1 brick for every 2 pairs of students).
- large aluminum baking pan/lasagna pan.

Each group will need its own “mini glacier” since it will melt over the course of 10-15 minutes.

Students will model glacial erosion by moving their “mini glacier” slowly over the clay and/or the brick surface inside the aluminum pan.

This melting process will leave sand, gravel, and water all over the area where students are experimenting. Students should make observations of the surfaces of the bricks and clay. Make sure they actually feel the brick’s surface. Although the texture of the brick changes as it is eroded, its appearance can be quite similar before and after, so touching it before and after will give students a better idea of how eroded it is. The clay should show very clear markings where the sand and gravel scraped over it. The bricks will smooth out very quickly, so you’ll need a brick for every two groups (one side per pair of students).

Starved Rock State Park
Ecology

Pre-Visit

- Discuss the vocabulary list.
- Watch educational videos:
- https://www.youtube.com/watch?v=E-6iKaFqzjw
- https://www.youtube.com/watch?v=KvDvfk8eVDI
- https://www.youtube.com/watch?v=rEZxVdhOnsM
- https://www.youtube.com/watch?v=N32LdaoHoJw&pp=ygUIYm9ib2xpbms%3D

Visit

- Plan a hike to Starved Rock or Matthiessen State Park.
- The tallgrass prairie can be seen at the Matthiessen Vermillion River Area access off of route 178 or at the south entrance to Starved Rock State Park off of route 71. Parking is available at both locations, but trails are only available at Matthiessen through the prairie but a guided hike with one of the seasonal park naturalists or Natural Resource Coordinator can be arranged to the Starved Rock Nature Preserve prairie or the tallgrass prairie at the south entrance of the park.
- The oak-hickory forest can be experience along any trail at Starved Rock State Park or Matthiessen State Park. The best trails to experience the forest are the brown bluff trails at Starved Rock State Park.
- Wetland habitats can be seen at Matthiessen Lake at Matthiessen State Park or the sea wall area from the boat ramp down to Lone Point Shelter at Starved Rock State Park along the Illinois River.
- Other parking lots that can accommodate a school bus.
  - St. Louis Canyon
  - Matthiessen Dells area at Matthiessen State Park
- Request the movie “On the Wings of the Wind” about bald eagles at Starved Rock State Park.
- Go on a guided hike with one of the park’s seasonal naturalists in the fall or full-time Natural Re source Coordinator in the winter and spring.

Starved Rock State Park
Ecology

Mammals have inhabited what we now call Illinois for approximately 100 million years. Many of these creatures are known to us only through their fossils. A significant number of these fossilized mammals date back to a time when glaciers covered much of Illinois.

During the Ice Age, vast expanses of ice, known as glaciers, blanketed around 80% of the state. Almost every area was covered in snow and ice. The plant life in Illinois during this period was quite different from what we see today. The environment resembled that of northern Canada and Alaska, filled with spruces, sedges, and other plants that thrive in cold conditions.

Mammals such as the giant ground sloth, American mastodon, mammoth, and giant beaver flourished in this frigid climate, feeding on the vegetation available to them. Unfortunately, all of these mammals are now extinct. Some mammals, like the snowshoe hare and arctic shrew, lived in Illinois during the Ice Age but are now found further north. However, animals such as the black bear, gray wolf, and elk were present in Illinois during that time and remained until more recently. Today, we can still find eastern cottontails, deer mice, gray squirrels, white-tailed deer, and raccoons, which also existed during the Ice Age.

As glaciers advanced and retreated across Illinois, the types of animals present changed with the climate. During warmer periods, jaguars, peccaries, and armadillos roamed the area. When temperatures dropped, mammoths, mastodons, and stag moose appeared.

One intriguing mammal from that time period was the giant beaver, scientifically named *Castoroides ohoioensis*. It was about the same size as a black bear and had a similar appearance to modern beavers. This enormous beaver was an herbivore, munching on soft plants that were easy to digest. It thrived in large ponds and lakes formed by melting glaciers and did not build dams like today's beavers do. Fossils of the giant beaver have been found in central and northern Illinois.

So, what happened to these ancient mammals? Why aren’t they found in Illinois anymore? The explanation lies in climate change, natural selection, evolution, and adaptation.

Starved Rock State Park
Ecology

Food Webs and the Flow of Energy

Have you ever come across the term "food web"? What does it mean? A food web is a diagram that shows all the different food chains in an ecosystem, illustrating who eats what and how energy moves between various living things.

Why are food webs so important? They help us see how different plants and animals rely on each other for food and energy in an ecosystem.

So, how do food webs function? Energy starts from the sun, goes to plants, then moves to herbivores, and continues on as one organism consumes another.

Food webs show how if one part of the web changes (like a plant population decreasing), it can affect other parts of the web (like the animals that eat that plant).

Producers: These are plants, like grass, that create their own food using sunlight through the process of photosynthesis.

Consumers: These are animals that eat other living things.

Omnivores: These creatures eat both plants and animals, like a raccoon that enjoys berries and bird eggs.

Primary Consumers

-Herbivores: These animals eat plants, like a rabbit munching on grass.

Secondary Consumers

- **Carnivores:** These animals eat other animals, like a fox catching a rabbit.

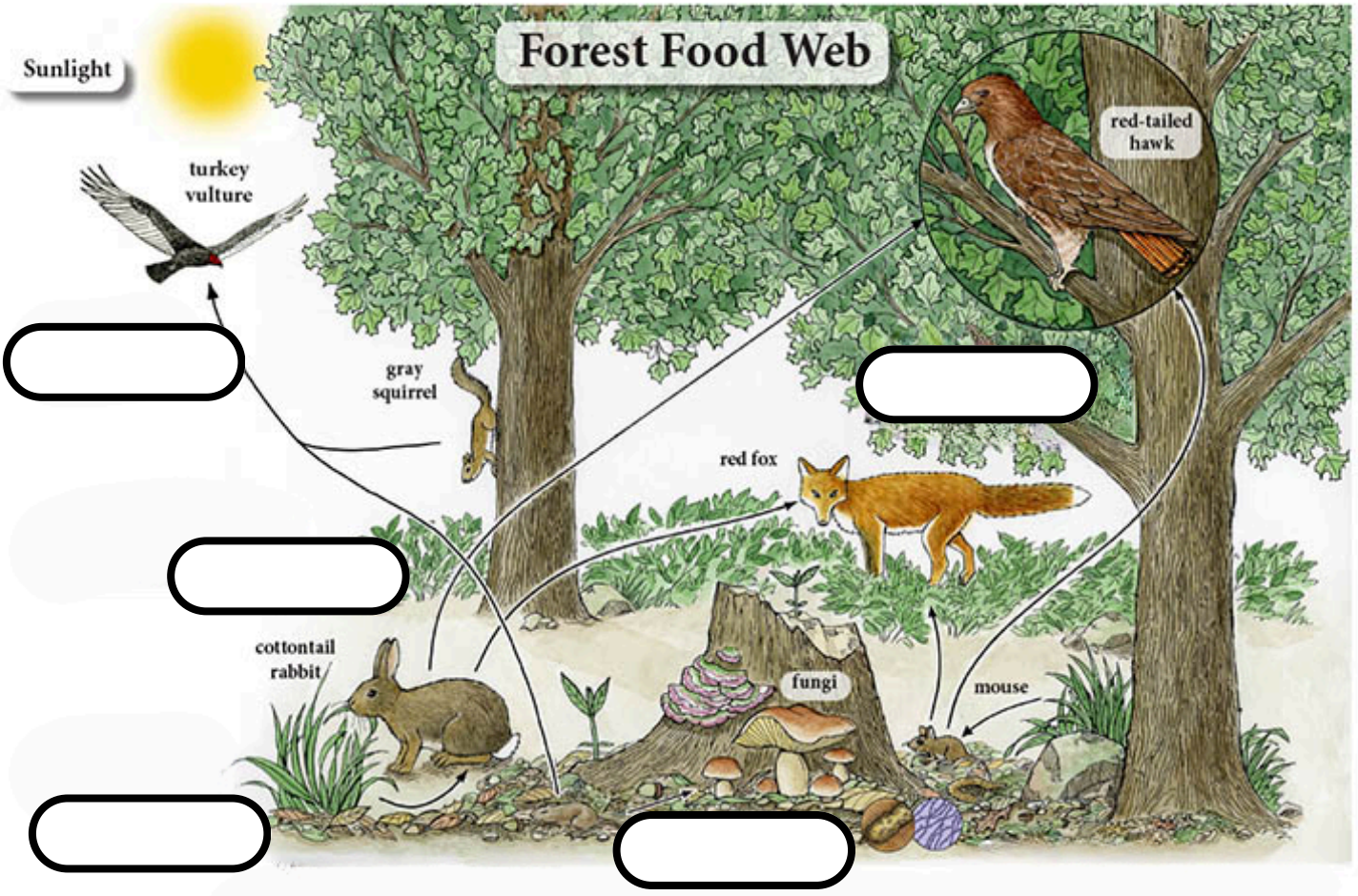
Decomposers: These are organisms, such as fungi and bacteria, that break down dead plants and animals, putting nutrients back into the soil.

Scavengers: Organisms such as turkey vultures that feed from animals, they did not kill themselves.

Starved Rock State Park
Ecology Activities

The image below represents a food web from a forest ecosystem found at Starved Rock State Park. Use the words from the word bank below to label members of the food web and their role in the energy flow.

Scavenger
Producer
Primary Consumer
Secondary Consumer
Decomposers



Starved Rock State Park
Ecology

Symbiosis

Symbiosis happens when two different species create a close bond and interact in ways that affect each other. You can think of it like a team, but sometimes the teamwork can be a bit harsh!

There are three main types of symbiosis:

Mutualism is when both species benefit from the relationship. For instance, ants are drawn to the sugary coating on the seeds of plants like the Dutchman's breeches. The ants carry the seeds back to their colony, enjoy the sugary coating as food, and then leave the seed in the ground of their ant hill, where it can grow into a new plant.

Commensalism is when one species benefits while the other remains unaffected. A good example of this is birds that build their nests in trees.

Parasitism is when one species benefits at the cost of the other. A classic example is a wood tick that latches onto a rabbit, feeding on its blood and potentially spreading diseases.

Natural Selection

Natural selection is how groups of living things change all the same; they have differences. These differences mean that some individuals have characteristics that help them survive better in their environment than others.

Variation: In a group of living things, you can see differences in characteristics such as color, size, or the shape of their beaks.

Inheritance: These characteristics are handed down from parents to their young.

Selection: The environment chooses which traits are beneficial for survival and having babies. Organisms that have these useful traits are more likely to live longer and produce offspring.

Adaptation: As time goes on, this process results in adaptation, where groups of organisms become more suited to their surroundings due to the build-up of helpful traits.

Starved Rock State Park
Ecology Activities

Natural Selection and Adaptations Activity

Birds have various types of beaks that help them eat different foods. This activity lets students learn about these adaptations by trying out kitchen tools with different foods.

Setup

Create 6 stations, each with a different food item. Prepare a container filled with utensils for the students to use as they move from one station to another. They will experiment with the utensils to see which one works best for handling and "opening" the food. The utensils represent different types of beaks or bills of bird species at Starved Rock State Park. Have them go through the stations once to test the utensils, and then a second time to match each food with the best utensil.

Food Items

- Oatmeal floating in small tub of water
- Red colored water in a small vase (you can add a flower around the vase)
- Chenille stems cut up in 2 inch pieces or gummy worms scattered on a arm sized branch or in a tub of loose soil.
- Acorns or sunflower seeds scattered on a baking sheet or the ground.
- A picture of a fish cut out.
- Plastic bugs (or smaller items like rice) in a container of soil

Utensils

- Small strainer
- Pipette
- Kitchen tongs
- Nutcracker or small pair of plyers
- Scissors
- Chopsticks

After they finish, have a discussion. Show a picture of a bird, talk about its diet, and demonstrate which utensil matches with which bird's beak.

For example:
- Duck – oatmeal in water – strainer
- Eagle – outline of a large fish – scissors
- Woodcock – bugs in soil – chopsticks
- Hummingbird – water in vases – pipette
- Warbler – plastic caterpillars – tongs
- Cardinal – acorns – nutcracker

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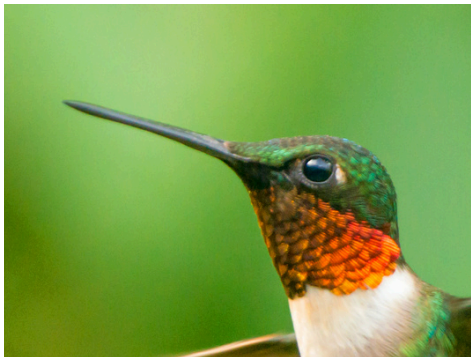
Conical-Seed Cracking
Northern Cardinal

All Purpose-Cracking and Tearing
American Crow



Needle-Probing and Sipping
Ruby Throated Hummingbird

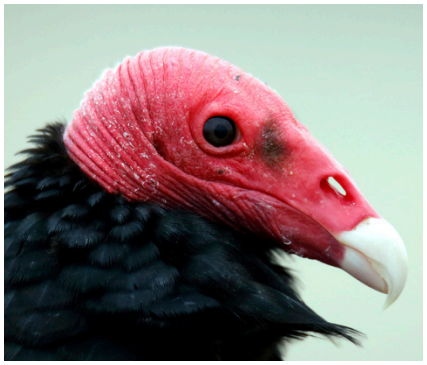
Crossed Bill-Pry and Cut
Red Crossbill

Conical-Insect Catching
Rough-Winged Swallow

Pouch and Hook-Dip Netting
American White Pelican

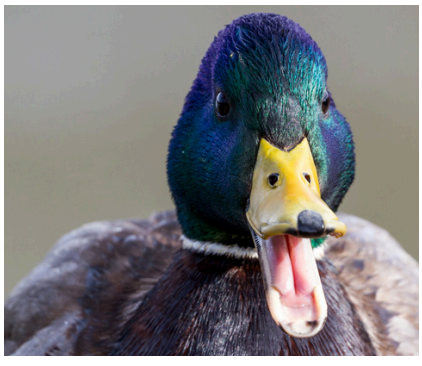
Chiseling-Insect Eating
Pileated Woodpecker

Raptorial-Hooked for Tearing
Bald Eagle



Scavenger-Bald and Hooked
Turkey Vulture

Curved Down-Filter and Sift
Curved Billed Curlew



Spatulate-Scoop and Filter
Mallard Duck

Probing-Poke and Pluck
American Woodcock

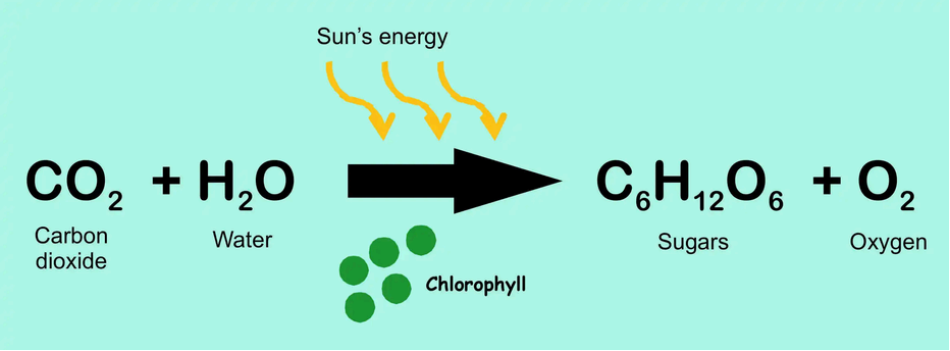
Starved Rock State Park
Ecology

Photosynthesis is how plants, algae, and certain types of bacteria harness energy from sunlight to create chemical energy for themselves to live.

There are two main types of photosynthesis: oxygenic photosynthesis and anoxygenic photosynthesis. Oxygenic photosynthesis is more common—that's the type we see in plants and algae. Anoxygenic photosynthesis mainly occurs in bacteria.

In oxygenic photosynthesis, plants use light energy to combine carbon dioxide (CO2) and water (H2O). This chemical reaction produces carbohydrates for the plants to consume and oxygen, which is released back into the air.

Chemical equation for photosynthesis



$6CO_2$
Carbon Dioxide (C=Carbon, O=Oxygen (2 units makes it dioxide) from the air that living things expel like the breath just just let out from your nose or mouth.

$6H_2O$
Dihydrogen monoxide (H=Hydrogen (2 units make it dihydrogen), O=Oxygen (1 unit is mono) also called H2O or water.

Sunshine or light energy that the green leaves soak up through powerhouse pigments called chlorophyll located in each plant cell inside of the plants leaves.

$C_6H_{12}O_6$
Carbohydrates (Glucose a type of sugar) is created and used as plant food.

$6O_2$
6 molecules of dioxide or OXYGEN which all living things need to breathe.

Why is Photosynthesis important?

First, it produces energy through carbohydrates which provide plants with the energy to grow and live.
Second, photosynthesis helps take in the carbon dioxide produced by breathing organisms and convert that into oxygen, which is then reintroduced back into the atmosphere. Basically, with photosynthesis, plants are helping produce the oxygen that all living things need to breathe and survive.

Starved Rock State Park
Ecology

Starved Rock State Park is home to a variety of habitats, such as tallgrass prairie, the Illinois River, sandstone canyons, and oak-hickory forests.

The oak-hickory forest is the most noticeable area along the park's trail system. While hiking, take some time to observe the different types of trees. Some trees, known as coniferous, keep their leaves or needles throughout the year. Others, called deciduous, shed their leaves in the fall. Once you figure out if a tree is coniferous or deciduous, you can use a dichotomous key to identify it more specifically. A dichotomous key is a tool that guides you through a series of choices to help you find the correct name of the tree. Give it a try while you're on the trail! See how many different species you can spot and name.

Use a Dichotomous Key to Identify Trees at Starved Rock State Park

Questions

- What is the difference between coniferous and deciduous trees?
- What is a dichotomous key?
- How can a dichotomous key be used to identify trees?

Materials

- An assortment of different tree leaves and pictures of the trees they came from or a hike along the trails at Starved Rock State Park when trees have leafed out during late spring through fall.
- A dichotomous key
  - You can take the IDNR Tree Trunk out for loan and use the dichotomous key inside.
  - You can check one out from your local library, or
  - You can purchase a tree identification key from the bookstore at the Visitor Center.
  - You can use an online key

Terms/Concepts

- Coniferous; Deciduous; Dichotomous key; Compound leaves; Simple leaves

Experiment

- To correctly identify trees, you will need to see the leaves and the branches on the tree. You can either do this by collecting leaves and taking pictures of the trees they came from, OR take a nature hike.
- Take a printed dichotomous key along with you (see pages 25 & 26)
- Once you have chosen a tree, decide if it is deciduous or coniferous.
- Follow the steps of the dichotomous key to identify your tree. Repeat this with 5 different trees.
- Record your observations and identifications in the chart on the next page.

Starved Rock State Park
Ecology Activities

Tree #	Coniferous or Deciduous	Leaf Drawing	Identification of the Tree (Tree Name)
1			
2			
3			
4			
5			

What Type of Leaves are These?

Sugar Maple

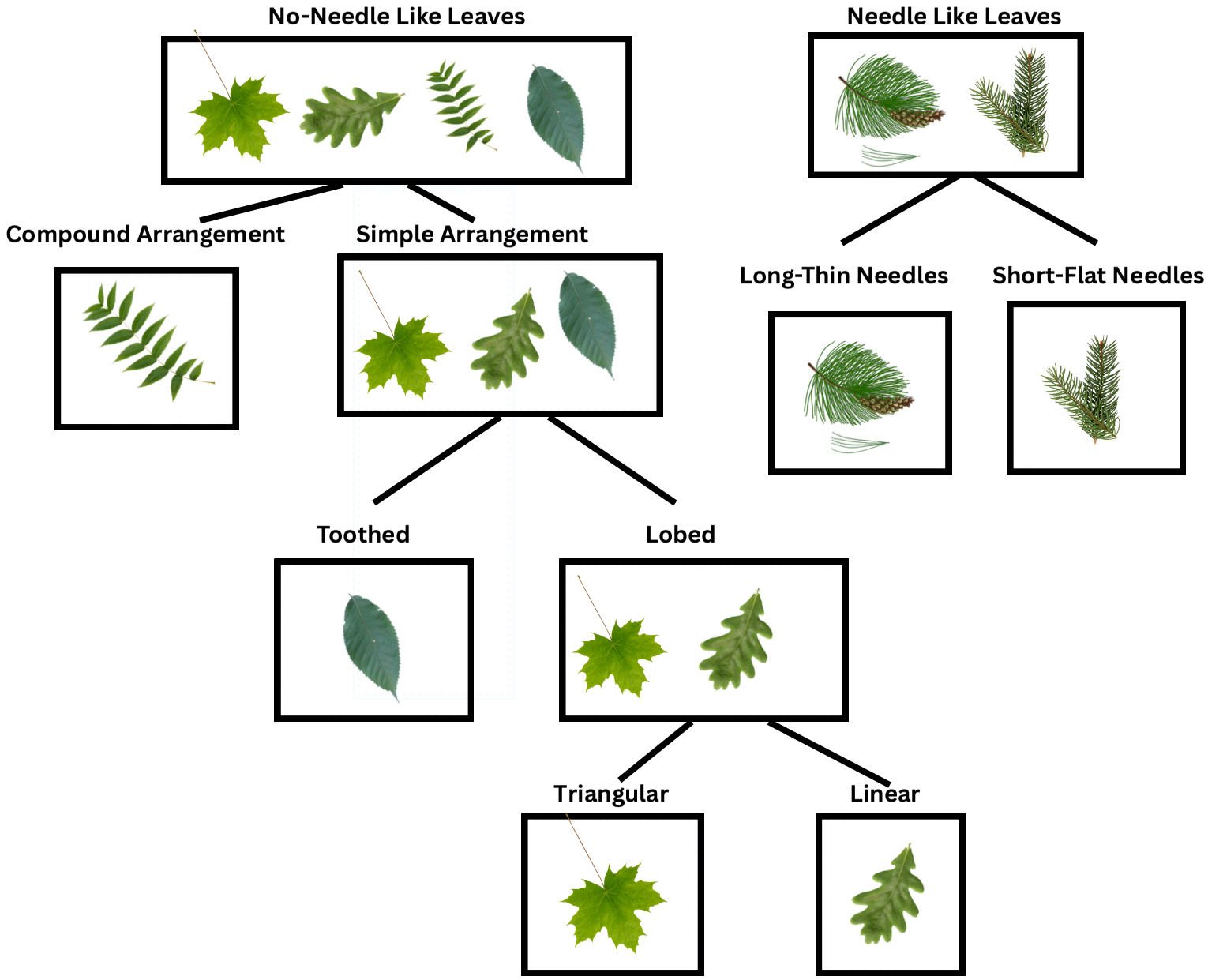
White Oak

Hophornbeam

Black Walnut

White Pine

Spruce



Starved Rock State Park
Ecology Activities

Citizen Science Program-Illinois

Citizen-science programs offer opportunities for students, teachers, and the public to participate in scientific data collection. Some programs require training. The following list includes a variety of the available options to people in Illinois.

Visit each organization's website for details and requirements.
https://dnr.illinois.gov/education/atoz/citizenscience.html

Great Backyard Bird Count
Launched in 1998 by the Cornell Lab of Ornithology and National Audubon Society, the Great Backyard Bird Count was the first online citizen-science project to collect data on wild birds and to display results in near real time. More than 160,000 people join the four-day count each February to create an annual snapshot of the distribution and abundance of birds.

Illinois River Watch
Illinois RiverWatch safeguards the future of Illinois rivers and streams through stewardship, education, and sound science. RiverWatch utilizes trained volunteers to collect quality-assured data on wadeable streams and fosters coordination among groups involved in similar monitoring efforts.

iNaturalist.org
Every observation can contribute to biodiversity science, from the rarest butterfly to the most common backyard weed. iNaturalist.org shares findings with scientific data repositories to help scientists find and use your data.

Starved Rock State Park
History

Pre-Visit

- Discuss the vocabulary listed below.
- Watch educational videos:
- https://www.youtube.com/watch?v=m-RNt4wNxb4
- https://www.youtube.com/watch?v=MLefuBao4ho
- https://www.youtube.com/playlist?list=PL96EFEAA3BA5B1934
- https://youtu.be/WTzsE58edHY?si=HIqZuswV7vl4tYnA

Visit

- Plan a hike to Starved Rock, the highest point of the park and the location of Fort St. Louis with views of the Illinois River and the site where the Grand Village of the Kaskaskia was once located.
- Interpretive panels on top of the rock are a great resource to visit with students.
- Request the movie “In the Shadow of the Rock” at the Starved Rock Visitor Center.
- View the various displays and exhibits on the Park’s history at the Starved Rock Visitor Center.
- Go on a guided hike with one of the park’s seasonal naturalists in the fall or full-time Natural Resource Coordinator in the winter and spring.

Starved Rock State Park
History

Indigenous History of Starved Rock

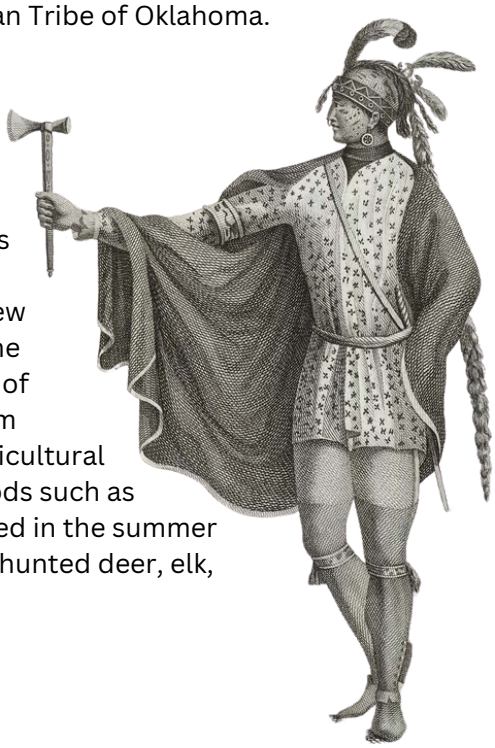
Native American History: Archaeologists have found evidence of humans living in the area now known as Starved Rock as far back as 8000 B. C. or 10,000 years ago. These were known as the Paleo Indians and later the Archaic people. They lived, for the most part, by hunting and gathering. From 8,000 BC until 1673 various kinds of people, such as the Hopewellian, Woodland, and Mississippian cultures frequented the area. The Illinois Confederation during the 1400s through the 1800s was divided into sub-tribes, the better-known ones being the Kaskaskia, Peoria, Cahokia, and Tamaroa. The Kaskaskia village extended along the north bank of the river directly across from the park with an estimated 500-600 houses in the village by 1675. The cabin-like dwellings known as wigwams were of small, rectangular shape, constructed of wooden poles and covered in mats made of rushes (grass-like plants that grow in wetland areas). They had one doorway, a central fireplace that served as a source of heat for warmth and cooking as well as lighting.

The Illinois Confederation

The Illinois Alliance consisted of, at the time of first French contact with the tribe, about twelve subtribes. Some of these subtribes included the Kaskaskia, Peoria, Tamaroa, Cahokia, and Michigamea. The Illinois called this inter-tribal alliance, Inokha. During the 1670s, the Illinois appeared to have numbered between 9,000 and 10,000 people. They occupied a territory that, at times, spread from modern-day Missouri to near the shores of Lake Michigan, north into today's Wisconsin, and as far south as the Arkansas River. In 1673, the Kaskaskia subtribe of the Illinois alliance lived along the Illinois River, and across the river and upstream from Starved Rock. Between 1673 and 1680, numerous Illinois subtribes joined the Kaskaskia at their village. By 1677, the village population grew to between 7,000 and 8,000 inhabitants. The village was abandoned by the Illinois in 1691 when the Illinois groups relocated to Lake Peoria.

In 1700, the Kaskaskia left Lake Peoria and established themselves first in present-day St. Louis, Missouri, and then, in 1703, along the Kaskaskia River in Randolph County, Illinois. By the mid-1700s, all Illinois subtribes lived in settlements along the Mississippi in Southern Illinois. In 1832, the Illinois sold their remaining land to the United States government and relocated to the Osage River in Kansas, where they were joined by the Wea and Piankashaw (Miami subtribes) in 1854, becoming the Consolidated Peoria tribe. In 1868, the Consolidated Peoria moved to Miami, Oklahoma, where they became the Peoria Indian Tribe of Oklahoma.

Culture



The Illinois lived in a seasonal cycle related to the cultivation of domestic plants and hunting, moving from semi-permanent summer villages to winter hunting camps, and then returning to summer villages in the spring. Their summer "cabins," as the French called them, were constructed of reed mats that could be disassembled and carried to new village sites. They planted maize (corn), beans, and squash, known as the "Three Sisters". They prepared dishes such as sagamite, a combination of domestic vegetables that was often mixed with animal fat or meat. Plum Island located west of the Starved Rock Lock and Dam was once an agricultural field and garden for the local Illinois tribes. They also gathered wild foods such as nuts, fruit, roots, and tubers. During the summer, the Illinois participated in the summer bison hunt, which lasted between three to five weeks. Illinois men also hunted deer, elk, and bear.

Starved Rock State Park
History Activity

Making Sagamite

Sagamité is a Native American dish of cornmeal-based soups, stews, and porridges that can include a variety of ingredients. The word "sagamité" comes from an Abenaki term and is similar to the Cree word kisâgamitew, which means "the liquid is hot".

Material List

¼ C lard, schmaltz, or vegetable oil
2lbs beef shank or pork hocks
1T salt
1lb bacon, chopped
1 medium onion, chopped
¼ C tomato sauce
2T maple syrup
2qt stock
3 juniper berries, smashed
1C red beans
1C hominy
½ C sweet corn
2C chopped winter squash
¼ C cornmeal

Procedure

1. Melt lard in a heavy pot or Dutch oven over medium heat. Season shanks with salt then brown in pan, when browned, remove from pot and reserve.

2. Add bacon and onion and cook until fat is rendered, and onion is translucent.

3. Add tomato sauce, syrup, stock, and juniper berries and cover, reduce heat, and braise for about an hour or until meat is tender.

4. Uncover and add beans, hominy, squash, and cornmeal, cooking an additional 20-30 minutes until cornmeal begins to thicken the broth.

Starved Rock State Park
History

The French in the Starved Rock Region

The Jolliet-Marquette Expedition during the summer of 1673, Jesuit missionary Jacques Marquette, and French-Canadian fur trader Louis Jolliet, explored the central parts of the Mississippi River, becoming the first people of European descent to do so. Jolliet, Marquette, and five French men paddled from present day St. Ignace, Michigan in two birch bark canoes as far south as an Indian village located on the Arkansas River. Their return trip took them back up the Mississippi and then up the Illinois River. A short distance upstream from Starved Rock, the group stopped at a village of Kaskaskia Indians, a site known today as the Grand Village of the Illinois Historical site, making the first contact with the Native Americans of today's state of Illinois. The French group continued up the Illinois, later ascending the Des Plaines River. After portaging to the Chicago River, the group paddled to Lake Michigan. Heading north, the French arrived at a Jesuit mission located near today's De Pere, Wisconsin, where Marquette remained until October 1674. Jolliet continued on to his trade post at Sault Ste. Marie. Jolliet was the first on record to suggest a canal to bridge the continental divide between the Great Lakes and the Illinois River.

The next Frenchmen to come through this area were Robert Cavalier Sieur de LaSalle, his lieutenant, Henri Tonti, and 20-30 voyageur paddlers. It was their mission to build a chain of forts so King Louis XIV's claim in the New World could be maintained. LaSalle came down the Illinois River around 1678 and stopped at the Kaskaskia village, noted the sandstone butte across the river, and continued down to the Peoria area, where they built Fort Creve Coeur in 1680. LaSalle left Tonti in charge and went back to Canada to supervise operations. In the spring of the next year, LaSalle heard that there had been trouble with the Native Americans of the area as well as with his own men. The fort had been destroyed, and all the men had deserted except Tonti, who was later found by LaSalle at the Kaskaskia village.

In the winter of 1682-83, LaSalle and his men constructed Fort St. Louis on top of the 125-foot-tall sandstone butte known as Starved Rock today. The fort commanded a strategic position on the Illinois River and offered protection to the Illinois people of the area from the marauding Iroquois from the east. The Iroquois (Haudenosaunee) hated the French for their intrusion on the land and wanted the Illinois resources for themselves since they were allied with the British. Many battles occurred during the next 20 years, including an attack on the fort in 1685, which did not succeed.

In the intervening years, a very successful trade flourished between the French and the Illinois. There was an abundant supply of wildlife in the area, including beavers. There was a great demand for beaver pelts in Europe, due to the fur's two different layers and rich oil coating which allowed it to repel water. Beaver hats and coats were in high fashion. The Native Americans would trap and trade beaver pelts for French goods such as beads, blankets, tools, and cloth. The alliance grew between the French and the Illinois while the French manned the fort through 1691. LaSalle seldom stayed in one spot for very long. He went in search of the Mississippi Delta from the Gulf Coast. He overshot the Delta, and he and his party ended up along the Texas coast. LaSalle was murdered in 1687 by members of his own disgruntled party. Tonti went to the Peoria area in 1692 and built a fort at the village of Pimitoui now known as the city of Peoria.

In 1702, a royal proclamation from King Louis XIV ordered Fort St. Louis to be abandoned and trading rights suspended. Both the French and Native American populations moved down to the lower Illinois River and into the Mississippi, eventually settling at the new posts of Cahokia and Kaskaskia. Fort St. Louis was used as a stopover place for hunters and trappers. It was reportedly dismantled in 1720 after being destroyed by fire. Tonti may have died in 1704 from yellow fever after he travelled south to join the governor of the French Colony of Louisiana at Old Biloxi. Another account says he was brought back to the old fort in 1718 by a faithful Native American companion to die.

Starved Rock State Park
History Activity

Equal Exchange Lesson Plan
(Adapted from the National Park Service, Bent's Old Fort National Historic Site)

Objective

Students will learn to recognize trade items and their estimated dollar values to make fair trades like those in the fur trade period. They will create algebraic expressions to show these transactions.

Background

Fort St. Louis started as a trading post located on the sandstone butte called Starved Rock by the Illinois River during the late 17th century, specifically from 1683 to 1691. Visitors to the fort included Native American tribes from the area, such as the Illinois, Shawnee, Miami, and (Mohican) Mahican. These tribes traded furs from animals like beavers, otters, minks, deer, elk, wolves (including coyotes), black bears, and foxes, for useful items from the French, including metal pots, guns, bullets, axe heads, knives, and fabric. This trading process was often lengthy and followed the customs of the Native Americans, relying on the development of respect and trust between both groups.

Preview

This activity shows how to create equivalent expressions with variables by solving real-life problems. You don't need to know much about algebra to start.

First, talk about a possible trade 'reward' with your group. For example, if each person follows a specific rule (r), they earn 1 minute of free time (m). Write on the board: 1 rule = 1 minute. Then ask the class, 'What happens if more than one person follows the rule? If 5 people follow it, how many minutes do they get? 5 rules = ___ minutes. What should go in the blank? Right, 5 rules or 5 (r) equals 5 (m) minutes. As a class, we want to get as many minutes as we can, so how many would that be? (Write the correct equivalent expression on the board).

Next, explain how this equation connects to today's lesson. Say, 'As a group, we just negotiated; I offered free time in exchange for following a rule. Today, we will explore trade negotiations from the fur trade era. Sometimes money was used at trading posts, but usually, people exchanged one type of trade good for another.'

Starved Rock State Park
History Activity Continued

Activity

1. Read the Background Intro aloud to the group.
2. After reading, ask, “When you go to the store today, do you have to build trust with the person who takes your money? Why or why not?”
3. Add “Earlier, when I offered to trade free time for rule following, do you have to trust that I will do what I say?”
4. Explain that all relationships, even economic ones, are built on trust.
5. Break students into pairs to consider this prompt: “What other things are needed to make a fair trade?” After a few minutes, invite students to share their ideas. Guide them to understand that a fair trade works when both parties get something they want.
6. Ask the group, “Is rule following for free time a fair trade? And what does the group and the teacher get if the trade goes well?”
7. Pre-read Equal Exchange Activity Page. Assign and circulate through the room to check for understanding.
8. Explain that at Fort St. Louis in the late 1600s, interpreters were often needed because of the many languages spoken. Similarly, math can be thought of as another language. We express math by using number symbols, the way words use letter symbols. However, some types of math use both numbers and letters, just like the expression I wrote on the board earlier: 5 r=5 m.
9. State “the letters in algebra problems are called variables. 5 r= 5 m is a type of equation called an equivalent expression. It means whatever is on the left side of the equal sign has the same value as whatever is on the right side of the equal sign. Most math problems you’ve already done in school are equivalent expressions. 3 + 2 = 5. 3 + 2 is the same as 5. How about d4 x 6 = 24? 4 x 6 is the same as 24.”
10. Say, “When people trade items, they want things to be equal or fair. Look at the ‘My Account’ example on the Activity Page. Notice that the kettle has a value of $8 and the blanket has a value of $9. Is that equal? (No.) What could we do to make this an equal trade?” Guide students to find combinations of equal value for either $8 or $9.
11. Read through the rest of the examples to show that the items to trade on the left equal the items traded for on the right. $14= $14.
12. **Write an expression for the example:**

1 k (kettle) + 2 p (beaver pelts) =1 b (blanket) + 2 c (Chocolate)

Point out that when a number (coefficient) is next to a letter (variable) with no operation sign in between, that means to multiply. So in this equation, 2 r means 2 times the value of r, and 2 c means 2 times the value of c.

Starved Rock State Park
History Activity Continued

13. Demonstrate solving this expression by filling in the values for the variables as given on the activity page. ($8 + $6 = $9 + $3 +$2).
14. For the activity page, have students generate their algebraic expression based on their traded items. Circulate through the room to check for understanding. After 15 minutes or so, regroup and call on volunteers to share their equivalent expression.
15. Recall the historical context of this activity and note how having strong math skills would have been important to traders.
16. Summarize the lesson and hand out the Exit Ticket.
17. Give group feedback on the progress they made during this lesson in reaching their free time fair trade.

Materials

Whiteboard or chart paper
Equal Exchange Activity Page

Assessment Materials

Conclude the lesson with the following assessment.

1. Name three things necessary to make a fair trade.
2. Set up this sentence like an algebra problem: Henry Tonti traded 4 knives (k) for 1 beaver pelt (p). Now solve. If one beaver pelt is $8, how much is each knife worth?

Answer Key

Equal Exchange Assessment
Answers to the Exit Ticket essential questions for Equal Exchange Lesson

1. Name three things necessary to make a fair trade.
    a. Negotiation skills, math skills, interpretive skills, and products of close value that people want or need.
2. Set up this sentence like an algebra problem: Henry Tonti traded 4 metal axe heads (a) for 1 beaver pelt (p).
    a. 1 p = 4 k or 1 (p) = 4 (k) or 1 x p = 4 x k.

Now solve. If 1 pelt is $8, how much is each axe head worth?
$8 = 4 a
8= 4 x a
8= 4 x 2
Each axe head is worth $2

Starved Rock State Park
Equal Exchange Activity - Trade Goods List

 **Axe** **$3.00**	 **Glass Beads** **$3.00/pound**	 **Knife** **$2.00**
 **Gun Flints** **$1.00/pound**	 **Kettle** **$4.00**	 **Lead Musket Balls** **$2.00/pound**
 **Wool Blanket** **$6.00**	 **Metal Arrowheads** **$1.00/for 4**	 **Beaver pelt** **$8.00**
 **Buckskin** **$5.00**	 **Musket** **$7.00**	 **Gun Powder** **$2.00**

Starved Rock State Park
Equal Exchange Activity - Worksheet

EXAMPLE

Item to trade	Quantity	Value	Traded for	Quantity	Value
Beaver pelt	1	$8.00	Kettle	1	$4.00
Deer pelt	1	$5.00	Knife	1	$2.00
			Arrowheads	4	$4.00
			Axe	1	$3.00
		Total $13.00			Total $13.00

YOUR TURN

Item to trade	Quantity	Value	Traded for	Quantity	Value
		Total $			**Total $**

Item to trade	Quantity	Value	Traded for	Quantity	Value
		Total $			**Total $**

Starved Rock State Park
History

Civilian Conservation Corps

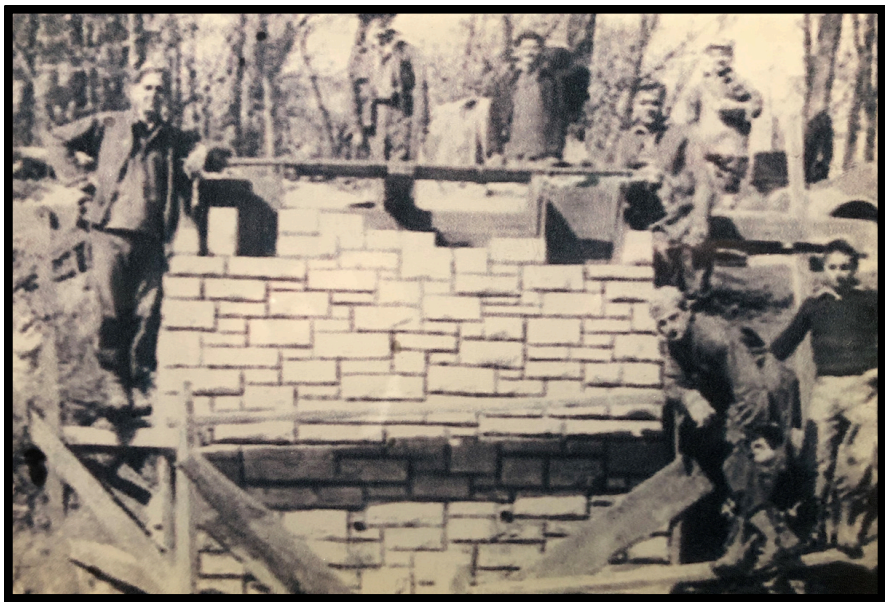
On July 1, 1932, New York Governor Franklin D. Roosevelt accepted the Presidential nomination, intending to address issues such as soil erosion and the depletion of timber resources by employing unemployed young men from major urban centers. President Roosevelt restored national confidence by initiating a "New Deal" for the country. Among the initiatives of this New Deal was the Emergency Conservation Work (EWC) Act, widely recognized as the Civilian Conservation Corps.

At the outset, the program was open to all married, unemployed male citizens aged 18 to 25, who could apply as junior enrollees. The ECW program initially aimed to aid unemployed youth but underwent two key adjustments in early 1933. First, it expanded to include about 14,000 Native Americans. Second, around 25,000 locally employed men (LEM) were enrolled to provide training and guidance to unskilled participants transitioning from urban life. The President issued Executive Order 6129 on May 11, 1933, allowing the immediate enrollment of about 25,000 veterans from the Spanish American War and World War I, with no age or marital status restrictions.

A typical Civilian Conservation Corps (CCC) camp would consist of a minimum of 11 structures, which would include four barracks, a dining hall, a recreation hall, a medical facility, quarters for officers, garages, a restroom, and a shower facility.

During the 1930s, Companies 614, 1609, and 2601 were based at Starved Rock State Park. Company 2601 was located where the visitor center and park maintenance facilities currently stand, while Company 614 had its tent barracks situated near the boat ramp at the park's west entrance. Parkman's Plain at Starved Rock State Park was home to the largest CCC Company, 1609. Today, two of the original CCC barracks remain at the park, repurposed as warehouses.

Starved Rock State Park
History



Also known as the “dollar a day boys”, a considerable portion of each participant's monthly allowance of $30 was given to their families. In addition to this, financial support for a standard five-day workweek, the young men received three meals daily, accommodation, clothing, footwear, vaccinations, and a range of medical and dental care. They also had opportunities for vocational, academic, or recreational training. Many enlistees joined the CCC, unable to read or write and emerged after a six-month to two-year service period with literacy skills, a high school diploma, and competencies in areas such as carpentry, masonry, radio telemetry, and forestry, among others.

The public works taken on by the CCC were varied and monumental. Many of the large-scale projects, nationally, involved the protection or reforestation of woodlands, including a major push to control forest fires. About 2.5 billion trees and 814,000 acres of grazing land were replanted. These efforts earned the CCC participants the nickname of “Roosevelt’s Tree Army”.

The CCC efforts were not confined to forest projects. The following were also due to the CCC and its work efforts in our nation:

- 7,622 dams were built
- 972 million fish were restocked
- 154 million square yards of stream banks were protected from erosion
- 52,000 acres of campgrounds were created
- 4,000 historic structures were renovated
- Buildings such as lodges, cabins, and shelters were built including the original section of the Starved Rock Lodge and its surrounding cabins and the fireplace in the Great Hall.
- Trail improvements or creation of suitable trails in both State and National Parks. Over 1,000 miles of trails were created by the CCC in Illinois.
- In Illinois alone over 60 million trees were planted.

Starved Rock State Park
History Activity

Typical Day for Camp 1609

A normal day started at 6:00 am with a wake-up call and flag-raising. After some exercises, a big breakfast, and cleaning up, they left for work at 7:45. Lunch was often eaten while working, and they returned to camp by 4:00 pm. After cleaning up and lowering the flag at 5:00 pm, they gathered for dinner. From after dinner until lights out at 10:00 pm, they could go to classes, read, or play games in the recreation hall. The guys at Camp 1609 had fun options. Some formed a band to play for new arrivals or departures. They also created basketball, baseball, and football teams to compete with other camps and local high schools. They would hang out with young people from nearby towns like Utica, Ottawa, and Oglesby at dances held in a hall that used to be where the Visitor Center is now.

Activity

Have the students imagine that their class/grade is a CCC camp and they are enrollees. Individually or in small groups, they should work to create their version of a camp newsletter and schedule. This could be in the form of traditional or modern media.

Students can use real-life scenarios or use their imagination for inclusion in the newsletter.

Note that camp newsletters were generally uplifting, and camaraderie was the focus.

Have students present their newsletters to the class. In addition to presenting their newsletter, students should share the following....

- One thing they are glad they do not have to do in school that they would need to do as a CCC enrollee.

- One thing they wish they had done during or instead of school, that CCC enrollees did.

View the example to the right of one of our very own CCC camp newsletters from Starved Rock State Park!

The CCC's slogan was "We Can Take It!". Do you think you could take being a CCC enrollee today?

THE CAMP LOG

MARCH OF TIMS MOVIE NEWS

SKELETONS FOUND

CCC DANCE

FAVORS CCC

CAMP MOVIES

Starved Rock State Park
Area Activities

Things to Do:

- 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, and 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 Museum in downtown Utica.

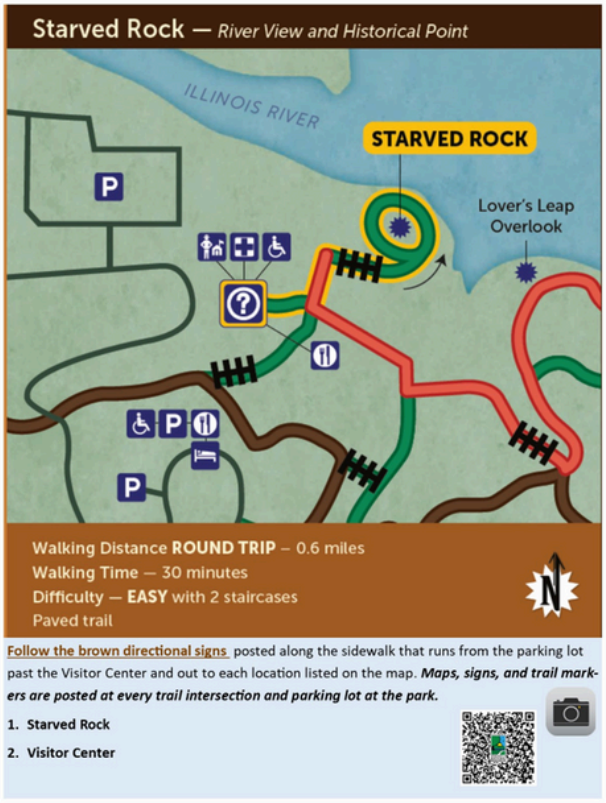
View the historical Starved Rock Lodge on the bluff behind the Visitor Center. Hike the sidewalk around the Lodge to view the wood carvings and sculptures.

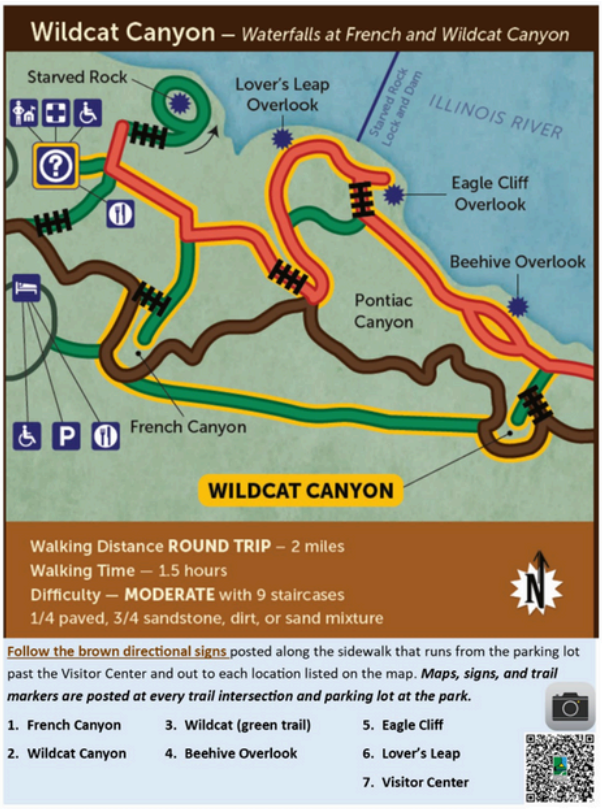
Visit the Canal Corridor Association on Route 351 and 1st Street in LaSalle to view the Illinois and Michigan Canal, schedule a tour on the historic mid-19th century tour boat

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

EVERYONE BELONGS IN NATURE

Visit 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!





Starved Rock State Park
Educational Resources

www.dnr.illinois.gov

https://dnr.illinois.gov/education.html

https://dnr.illinois.gov/education/atoz/citizenscience.html

https://discover.hubpages.com/animals/barn-owl-nesting-box

https://wildillinois.org/

https://sites.google.com/illinoisstatemuseum.org/educatorspage/exploring-geology

https://sites.google.com/illinoisstatemuseum.org/educatorspage/exploring-fossils

https://sites.google.com/illinoisstatemuseum.org/educatorspage/indigenous-people

https://inhs.illinois.edu/

https://earthathome.org/hoe/mw/glaciers/

https://www.bing.com/videos/riverview/relatedvideo?q=illinois+geology+videos%27&mid=DB6F1B6C99D5EA6A5C6EDB6F1B6C99D5EA6A5C6E&FORM=VIRE

https://www.teachingexpertise.com/science/rock-cycle-activity-ideas/

https://exploringnature.org

https://peoriatribe.com/history/

https://www.youtube.com/watch?v=FuAx_UBHwjM

www.justonly.com/physic/ps111/pdfs/geohistory_illinois.pdf

Storymaps.arcgis.com/stories/eb4b95585edd4136a4ed6f7d868d431d

https://www.organizedhomeschooler.com/9-rock-activities-for-middle-school/

https://youtu.be/-43_HBy9huc

https://youtu.be/CMiPYHNNg28

https://youtu.be/CMiPYHNNg28

https://youtu.be/Rz4yRzEonMs

https://youtu.be/PzzCOEDtiMM

https://youtu.be/qRn62gtgntY

https://youtu.be/xDSFlRunlrU