



New Jersey School of Conservation
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Sunrise Mountain Hike





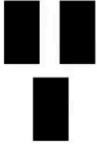
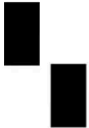
Minimum time requirement: 3 hours round trip
Minimum age requirement: Grade 5+

Activity level: Strenuous
Travel: 3 miles one way, 6 miles round trip

Intro: Challenge students to identify the route they will be taking on the Stokes State Forest trail map. Discuss how Stokes State Forest was originally donated by NJ Governor Stokes in 1907. He personally donated the first 500 acres to the state to establish the park. Today Stokes encompasses 16,025 acres.

<https://nj.gov/dep/parksandforests/maps/stokes-trail.pdf>

- **Trail Markers:** At the start of the hike, the educator will teach the students how to read trail markers. It can be fun to have the students be your helpers in looking out for the trail markers, especially on Green Darner, as it's a little more challenging to follow the trail until you get to the Springbrook Cabin.

CONTINUE STRAIGHT 	START OF TRAIL 	RIGHT TURN 
SPUR LEADING TO A DIFFERENT TRAIL 	END OF TRAIL 	LEFT TURN 

- **Old Beaver Pond:** When walking along Green Darner off to the right you will see the site of an old beaver pond that is now following the patterns of succession and has been turning back into a forest. Beavers alter their habitat substantially and build structures including dams and lodges. Many animals benefit from the habitat that beavers create, including amphibians, wading birds,

ducks and geese, and fish. Eventually, the ponds that beavers create will fill in and become rich stream meadows, continuing to benefit other wildlife species.

- **Geology:** After you pass the area where the beaver pond used to be the trail becomes very rocky. Discuss with students why it is so rocky. Stokes State Forest has a large number of rocks primarily due to the impact of glacial activity, specifically the Wisconsin Glacier, which scraped and scoured the area during its retreat, leaving behind a significant amount of rock debris and glacial till across the landscape.
- **Spring Brook Cabin:** Have students imagine what it would have been like to live in a cabin in the woods with no running water or electricity. What would be some of the pros and cons?
- **Swenson Trail or Blue Dot :** As you make the left turn onto Swenson you can have students start looking out for chew marks on the trail blazes. Ask students what kind of animal they think would have done this. The answer is most likely porcupines. Why they do this is up for debate. They are an animal whose teeth are continually growing throughout their life so by chewing on the sign, they may be wearing them down so they don't grow too long.
- **Cartwright Trail or Blue Dot:** After crossing two creeks on Swenson, have the students look out for Cartwright Trail, which is also the Blue Dot trail. Look at the map and talk about observing landmarks to knowing where to turn. This is also a good time to talk about topographic maps and what the lines mean on a map. As you go up Cartwright you will gain about 500 ft in elevation in a short distance.
- **Geology:** As you get up on the ridge, it's good to point out which directions different states are and to take time to enjoy the view. The Kittatinny-Shawangunk Ridge and Corridor is a 250-mile-long geologic feature that crosses parts of New York, New Jersey, and Pennsylvania, running from northeast to southwest.

Sunrise Mountain is a peak of the Kittatinny Mountains. The mountain is 1,650 ft and lies on the Appalachian Trail. The Appalachian Trail is 2,197.4 miles long running from Maine to Georgia.

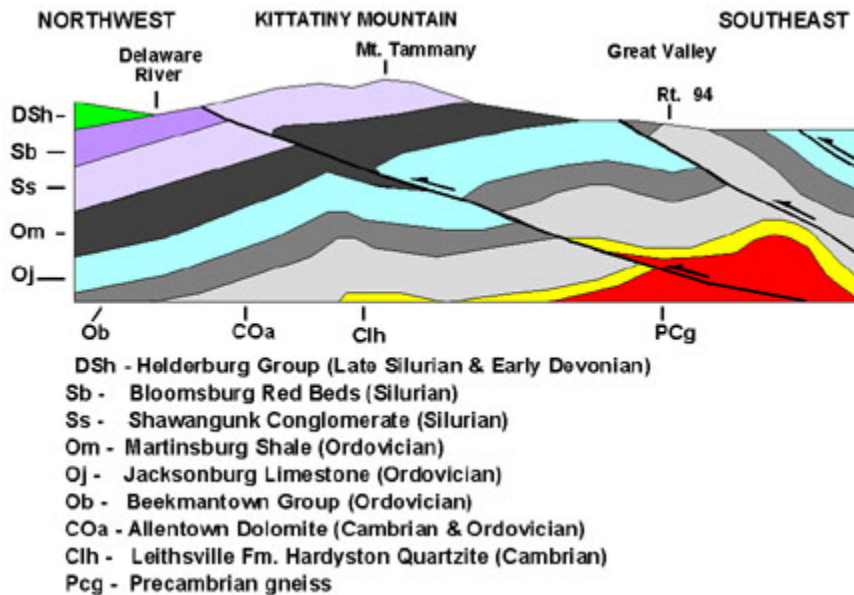
Kittatinny Ridge is an almost unbroken escarpment, or long steep slope, of Shawangunk conglomerate, a mixture of quartz and reddish slate pebbles in a grayish silicate matrix. This formation is about 400 million years old.



<https://www.nysm.nysed.gov/research-collections/geology/resources/shawangunk-ridge>

During the Pleistocene Epoch, which began around 2.6 million years ago and ended around 11,700 years ago, about 21,000 years ago, Stokes State Forest was buried beneath 2,000 feet of ice. This was called the Wisconsin Glacier. The ice sheets were formed by compacted and recrystallized snow that eventually became thick enough to flow under its own weight.

Evidence of the ice age can be seen in the bedrock at Sunrise Mountain in New Jersey. The bedrock is smoothed and polished, with long, thin, parallel gouges called glacial striations. These grooves were created by stones and rocks trapped beneath the ice that gouged the bedrock.



Glaciers expanded and retreated from New Jersey at least three times during the Pleistocene Epoch. The most recent glaciation, the Laurentide ice sheet, occurred about 21,000 years ago

History of the CCC:

From 1933 to 1942, the CCC men of Stokes built Sunrise Mountain Road, erected the pavilions, lean-tos, and cabins, dammed streams to create Lake Ocquittunk and Lake Wapalanne, and planted hundreds of trees throughout the forest.

The CCC was a New Deal program created by President Roosevelt that employed young men to improve the country's public spaces. The CCC was established in 1933 during the Great Depression to help relieve unemployment.

Activities at Sunrise Mountain Pavilion:

Have students look for the 2 stones that were laid in the pavilion that look like the state of NJ. Discuss the CCC and how the program affected the country.

Have students spread out and explore journal questions:

- **What did you notice?** What did you see, hear, smell, feel?
- **What did you wonder?** What questions came up for you?
- **How do you feel?** What feelings did you experience as you hiked up the ridge? How does it feel looking out at the view from Sunrise Mountain?
- **What do you like about this place?**
- **How has this landscape changed over time?** What have you learned about the geology of this region and how has it changed?
- **What can you learn from this experience?** What can you learn about yourself or the natural world?
- **Hiking Trail Segments:**

Trail Segment Distances:

SOC Campus-Green Darner- Spring Cabin: 25 min walk, 0.75 mile

Spring Cabin-Swenson-Cartight-Sunrise Road Crossing: 30 min walk, 1.5 miles

Sunrise Mountain Rd-Sunrise Pavilion: 33 min, 0.81mile

Sunrise Pavilion- Tinsley Trail: 26 min, 0.91 mile

Tinsley Trail- Black Bear: 30 min, 1.44 miles

Black Bear-SOC Campus: 13min, .59 mile

References:

<https://dep.nj.gov/wp-content/uploads/njgws/enviroed/infocirc/glacial.pdf>

Stokes_guide.pdf

<https://nj.gov/dep/parksandforests/parks/stokesstateforest.html>