

## JOE 2019 Information Packet for **Mines, Minerals and Buckwheat Tour**

<b>Day:</b> Saturday	<b>Start Time:</b> 8:30 am.	<b>End Time:</b> 4:30 pm.
<b>Co-Leader:</b> Scott Berman	<b>Co-Leader:</b> n/a	<b>Limit:</b> 15 people
<b>Transportation:</b> Two Personal Cars	<b>Driver:</b> Scott Berman -Car Douglas Gruber - Car	<b>Radios 0 / First Aid Kit 0</b>
<b>Fees:</b> \$33	<b>Travel Distance:</b> 70 Miles Round Trip	<b>Travel Time:</b> 2 Hrs. Round Trip

## **Mines, Minerals and Buckwheat Tour**

### **Sterling Hill Mining Museum**

Take a 1/4-mile walking adventure into the fourth oldest mine in the country and the last working underground mine in New Jersey. See the only fluorescent Rainbow Tunnel, Museum of Fluorescence, and the most amazing collection of fluorescent minerals anywhere on earth! Most of everything human-made has something to do with mining.

At the Sterling Hill Mining Museum, you'll see just how it's done. From drilling and blasting to the processing of the ore. Right here in NJ is one of the world's richest zinc ore deposits; the area boasts more than 354 minerals, about 88 of which fluoresce. That's about 10 percent of the known minerals in the world right here in NJ as well as the best fluorescent mineral deposit in the world!

### **Franklin Mineral Museum**

The zinc mining district of Franklin is known worldwide for an abundance of fluorescent and rare minerals. The Museum exhibits fluorescent, local and world-wide minerals, artifacts, fossils, and a safe two-level mine replica. Explore on the famous "Buckwheat" a large mineral-rich rock field where you can collect your specimens, then dig for fossils and go gem panning. There will be an optional guided tour during our visit.

- Both mines are a damp 56 degrees Fahrenheit year-round -- a light jacket is recommended.
- Proper footwear (sturdy hiking shoes) is required if you plan to explore the "Buckwheat" for specimens; collectors must also wear protective eyewear when using tools (hammers, chisels, etc.).
- The vendor does NOT supply any specimen collecting tool; you must supply your own. Claw hammers are not allowed.
- This tour is mostly wheelchair/stroller accessible. (no rolling around in the Buckwheat)
- Costs: \$33
- Distance from Camp 70 Miles / 2 Hours Round Trip Drive Time

### **Travel Plan:**

- 8:30 Leave Camp
- 8:30 - 9:30 Travel to Sterling Hill Mining Museum
- 10:00 - 12:00 Take a tour of Sterling Hill Mining Museum
- 12:00 - 12:10 Travel to Franklin Mineral Museum
- 12:10 - 12:40 Lunch at the Picnic Tables at Franklin Mineral Museum
- 12:40 - 3:30 Tour Franklin Mineral Museum (including an optional guided tour at 2 PM.)
- 3:30 - 4:30 Return to Camp

### **Costs:**

- \$33 / \$28 Senior (+65): Tickets will be pre-paid. Go to the ticket counter at the vendor to pick up tickets.
- \$12 Adult / \$11 Senior for Tour of Sterling Hill Mining Museum
- \$15 Adult / \$12 Senior (65+) Combination Museum Exhibits & Rock
- \$5.6025 Adult / \$5.6025 Senior = 20.75% = 10.75% State Sales Tax plus 10% MOCA Fees (Registration, Transportation, Insurance and other Administrative Fees)

## Sterling Hill Mining Museum



- 30 Plant Street, Ogdensburg, New Jersey 07439 (Entrance on Passaic Street under railroad trestle)
- 973-209-7212 / [info@shmmuseum.org](mailto:info@shmmuseum.org) / <https://www.sterlinghillminingmuseum.org>
- [Trip Advisor Review](#): 221 Reviews 73% rate Excellent (as of publishing date)
- Historical and other background info: <https://www.njskylands.com/atsterhill>

### **The Sterling Hill Mine**

The Sterling Hill Mining Museum offers public tours to individuals and families according to our operating schedule. **Public tours last roughly two hours.** In those two hours, guests will be guided through our Zobel Hall Museum, the mine, and our Warren Museum of Fluorescence. Half an hour is dedicated to our Zobel Hall Museum, about an hour to the mine, and 15 minutes to the Warren Museum. To go into either of the museums or the mine, **one MUST be a part of a tour**: there are no unguided tours. Before or after the tour, one may go on a self-tour around the parking lot area which hosts an array of historic mining machinery and equipment.

### **The Rainbow Tunnel**

Arguably, the most anticipated exhibit in the mine is the Rainbow Tunnel. This is an area of the mine wall where the intensely fluorescent zinc ore is exposed. When subjected to shortwave ultraviolet light, the walls fluoresce bright green and red. The red being calcite and the green being willemite, which was one of the main zinc ore minerals mined here.

### **What to Expect**

Visitors will be guided through about 1300 feet of the tunnel inside the mine. There are no train rides involved. Therefore, it is a walking tour. Along the way, guides will stop at various stations and explain the equipment, history, working conditions, and geology of the mine. Visitors will see the lamp room, the shaft station, mine galleries dating to the 1830s, and much more. The tour is only the first level of the mine; visitors do not go down to any lower levels.

### **The Warren Museum of Fluorescence**

The Museum was founded in 1999 by Thomas S. Warren. This museum occupies four rooms of the old mill building from 1916. There are more than 700 fluorescent minerals and objects on display throughout the four rooms.

### **Some Exhibit Highlights**

#### **The Color Wall**

Upon entering the main room of the museum, visitors will see before them the Color Wall, a 16-ft.-wide, floor-to-ceiling display of 100 oversized fluorescent mineral specimens, some of them 2-3 ft. long and weighing more than 100 pounds! A sequential lighting scheme allows viewers to see the minerals first under longwave ultraviolet light, then under shortwave ultraviolet light, and finally under both. This is followed by a brief period of darkness so that the phosphorescence, or "afterglow," of some of the minerals can be seen.

## **Touchable Displays**

In the main room, there are fluorescent minerals piled on open ore cars. Suspended above the ore cars are longwave ultraviolet lights. Visitors will see that when they stand by the tables and touch the minerals, it is not only the minerals that fluoresce but themselves as well.

## **Theme Cases**

More than a dozen theme cases in the Warren Museum illustrate some facet of fluorescence. Some of the themes involve a specific mineral, a locality, and an activator element, among others. No less beautiful than the other displays, these cases allow visitors to learn as much or as little about fluorescence as they wish.

## **Zobel Hall Museum**

With more than 12,000 items on display, the Zobel Hall Museum offers much to see. One can expect to see a plethora of mining equipment and machinery, ore specimens, meteorites, fossils, inventions by Thomas Edison, artwork, and much more!

## **History**

Before this building was the Zobel Hall Museum, it used to be the miners' Change House. This was the first and last stop of their workday. The entire building was filled with about 300 steel lockers. Each miner had his own locker with a chain attached. The chain looped over a pulley in the ceiling and thence down to a basket, beneath which were two metal hangers. At the end of the day, a miner would take off his wet and muddy work clothes, hang his shirt and pants on the hangers, put his boots in the basket, and pull the chain to hoist the basket close to the ceiling where the air was drier. Thus, his clothes would dry overnight. Some of the original lockers and baskets can be seen in the museum today.

## **Some Exhibit Highlights**

### **Oreck Mineral Display**

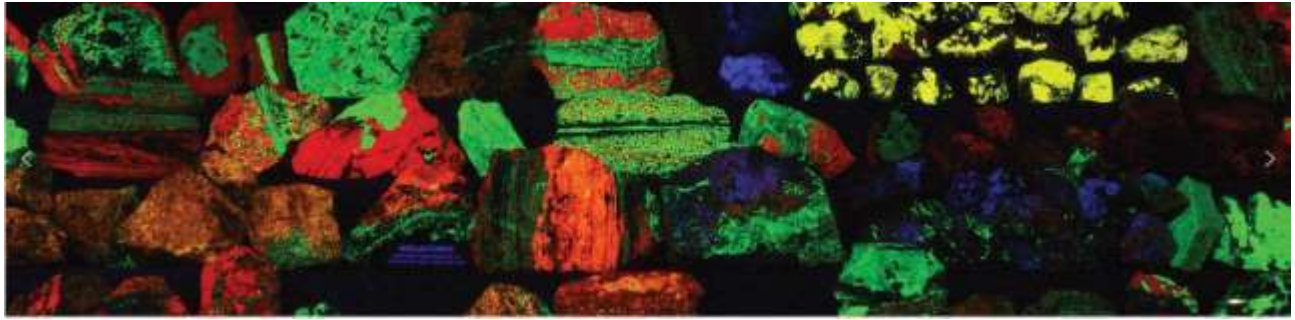
Back where the miners' showers were, there is now a multi-million-dollar mineral display donated to us by the Oreck family. The Oreck Mineral Gallery contains hundreds of fine mineral specimens in fifteen custom-designed glass display cases with fiber-optic lighting. This is the finest display of minerals in the State of New Jersey. Special exhibits include pegmatite minerals, the minerals of China, Russia, and Africa. There are also displays of individual mineral species such as quartz, fluorite, calcite, stibnite, barite, Celestine, and copper.

### **Fluorescent Mineral Display**

In one corner of the museum, there is a 7-foot-wide display of the local fluorescent minerals extracted from the Sterling Hill and Franklin zinc mines. Upon entering this room, you will discover why the Franklin area is regarded as the "Fluorescent Mineral Capital of the World." This room gives visitors a taste of what is in store for them in the Warren Museum of Fluorescence, where more than 700 specimens of fluorescent minerals from worldwide localities are on display in three large rooms.

### **Periodic Table Display**

In the museum, there is an interactive, 10-foot-long representation of the Periodic Table of the Elements. Each of the 112 cubbyholes in this display contains a sample of the actual element, a representative sample of ore from which that element is obtained, plus an item made from that element. Currently, we know of no larger or more complete display of the Periodic Table anywhere in the world.



## Franklin Mineral Museum

The zinc mining district of Franklin is known worldwide for an abundance of fluorescent and rare minerals. The Museum exhibits fluorescent, local and world-wide minerals, artifacts, fossils, and a safe two-level mine replica. Explore on the famous "Buckwheat" a large mineral-rich rock field where you can collect your specimens, then dig for fossils and go gem panning.

Enjoy viewing the museum exhibits on your own or take our optional guided tour at 2 pm.; guided tours may be preempted due to scheduled groups.

There is an outdoor picnic area or covered pavilion available. No barbeques allowed. Vending machines are located on the premises for drinks or snacks. A fabulous gift shop is present that sells books, jewelry, specialty gifts, and souvenirs. Great kids' items are here too!

<https://franklinmineralmuseum.com/> / [info@franklinmineralmuseum.com](mailto:info@franklinmineralmuseum.com) / 973-827-3481

<https://www.facebook.com/FranklinMineralMuseum/> / <https://www.instagram.com/franklinmineralmuseum>  
<https://www.ebay.com/str/franklinmineralmuseum>

[Trip Advisor Reviews](#): 63 reviews 48% Excellent (as of publishing date).

### General Information

**Self-Guided Tours.** Visitors are welcome to view the exhibits and walk through the museum without a tour guide, but some restrictions may apply if group tours are in progress.

**Rock collecting** is available daily, except during extreme weather. The primary mineral collecting area, the Buckwheat Dump, closes 30 minutes before the Museum. Proper footwear (no open-toed shoes) is required; collectors must also wear protective eyewear when using tools (hammers, chisels, etc.). Claw hammers are not allowed. The museum does not supply collecting tools; please bring your own. A viewing shed equipped with ultraviolet light is available for inspecting your minerals for fluorescence.

While here, visit the **Museum store**. Local and worldwide minerals are available for sale, along with ultraviolet (UV) lights, jewelry, rock ID kits, books on minerals and fossils, and teaching aids. It's a great place to shop for unique birthday and holiday gifts!

Most areas of the Museum are **handicap accessible**, including the upper mineral collecting areas.

**Lobby Displays** Four large display cases line the wall along the passageway from the Museum lobby to the Mine Replica. Two of these contain historical items from the local area, including homemade miners' boots, kerosene lanterns used along the local rail lines, antique watch fobs, and cabochon gemstones cut from minerals found in the Franklin mine. The other two cases feature minerals, photographs, historical documents, etc. from local collectors and are changed every year or two.

**Outdoor Displays** Visitors to the museum are greeted by a variety of outdoor exhibits as soon as they step from their cars. Prominent among them is a bronze statue of a miner and a series of historical ore cars once used in the Franklin mine. The large block of rock sitting on the lawn is a mass of zinc ore, brought to the Museum from a surface remnant of the Franklin orebody near High Street.

### **Museum Rooms:**

**Local Mining Heritage:** More than 4,000 mineral specimens. View minerals from the Franklin and Sterling Hill mining district, including numerous specimens of the local zinc ore minerals (willemite, franklinite, and zincite).

**Fluorescent Room: Hundreds of specimens** A 32-foot-long display showcasing local fluorescent minerals. Discover why the New Jersey State Legislature in 1968 declared Franklin the "Fluorescent Mineral Capital of the World."

**American Indian Room: Tools, baskets, pottery, and more** A main feature of this room is a large collection of Native American stone tools made by the Lenni Lenape Indians, the earliest inhabitants of what later became New Jersey.

**Fossil Room:** The best-petrified wood displays in New Jersey The fossil room offers a fine selection of fossil trilobites, dinosaur footprints, a mastodon tusk, and coprolites (fossil dung!) and more.

**Welsh Hall:** Visitors will marvel at the diverse collection of worldwide minerals, numbering more than 5,000 specimens in all!

**Mine Replica and Artifacts:** Life-size examples of mining methods used in the Franklin mines. See numerous mining-related items such as cap lamps, mill concentrates, pig iron, and artifacts from Thomas Edison's iron-mining and milling operation on Sparta Mountain.

**Museum Store:** If you feel like taking home a souvenir or attractive mineral to remember your visit with us, you may want to visit our Museum store in the lobby. We have in stock hundreds of different gift items, including a large selection of jewelry, local and worldwide minerals, fossils, ultraviolet lamps, earth science books, and more.

**Picnic Areas:** Two picnic areas are provided on the grounds for the enjoyment of our visitors. One, in a grassy area directly behind the Museum, is bordered by shade trees. Nearby, a second picnic area beneath a pavilion offers shelter from the rain and a shady place to sit during hot weather.

Vending machines nearby offer soft drinks and snacks, and a coffee machine is available in the Museum lobby.

JOE 2019 Information Packet for **Mines, Minerals and Buckwheat Tour**

**Street Address:** 32 Evans Street, Franklin, New Jersey 07416 Tel: (973) 827-3481

**GPS Coordinates:** 41°06'49.0"N 74°35'18.8"W / 41.113620, -74.588562

Museum Hours: April – November: Sat: 10 a.m. - 5 p.m. / Sun: 11 a.m. - 5 p.m. / Mon-Fri: 10 a.m. - 4 p.m.

**Admission Prices: Individual – Base Price is the Museum Exhibit only. Additional Charges if you choose to do more.**

**“Adventure Package”** - Adults \$24.00

*Includes admission to Museum Exhibits, Rock Collecting, Fossil Dig, and Gem Panning. Spend the whole day with us!*

**Combination Museum Exhibits & Rock Collecting** - Adult \$15.00 / Senior Citizens (65+) & Veterans \$12.00

*Includes collecting bag and two pounds of specimens per paid admission. Additional poundage fee: \$1.50 per pound.*

**Museum Exhibits only** - Adults \$10.00 / Senior Citizens (65+) & Veterans \$9.00

*Poundage fee: \$1.50 per pound.*

*All persons going into rock collecting areas must pay admission. Collecting area closes 30-minutes before museum closing.*

**Fossil Dig** - \$10.00 per person

*Price includes one fossil to take home, but participants can uncover as many fossils as they like before choosing which one to keep.*

**Gem Panning** - \$15 per bag of gem rough

*Similar to panning for gold: Gems are obtained by washing away sand of lighter weight in a water sluice.*

**\*\*Check website for group rates**

In daylight, fluorescent rocks are boring; just pink, black, grey and brown. You will not find very little pretty rocks in the buckwheat. To find fluorescents (mostly combinations of green, orange and red with a few light blues and mustard yellows), you need to know what the minerals look like in daylight or have a powerful short and long-wave UV lamp that cost from \$200 to \$500 that makes them glow bright enough to find them. Even with the lamp, you need to go on a dark day or at night. Some people walk around the dump under a BBQ grill cover with their lamps.

## MINERALS ARE A PART OF OUR DAILY LIVES

Celebrate nature, history, and science by discovering how minerals and mining history affects each of us.

## MISSION STATEMENT

The Franklin Mineral Museum's mission is to preserve and disseminate knowledge related to the mineral wealth, geology, and history of "the greatest mineral locality on Earth," and to foster scientific inquiry into those subjects.

To that end, the Museum acquires, preserves, and displays mineralogical and geological specimens, artifacts, and documents related to the history and mineralogy of the Franklin-Sterling Hill mining district. The Museum also acquires and displays archeological and paleontological specimens and other items of interest.

The Franklin Mineral Museum, a nonprofit educational institution, is located at 32 Evans Street, Franklin, Sussex County, New Jersey. The Museum was created solely for educational and scientific purposes, was incorporated June 2, 1964, and first opened its doors to visitors on October 9, 1965.

## MUSEUM HISTORY

Franklin, New Jersey, and its close neighbor, Ogdensburg, are the homes of the world's most famous zinc mines.

The zinc ore here was fabulously rich, averaging nearly 25% zinc by weight, and there was a lot of it; over the years these two mines produced 33 million tons of ore. By any measure these two orebodies and the metamorphosed limestone that encloses them comprise one of the top ten mineral localities in the world, a fact known to mineral collectors and professional mineralogists alike.

The Franklin orebody is famous for its spectacular fluorescent minerals and abundance of rare mineral species. Indeed, nothing closely resembling it has been found anywhere else on our planet, save its sister orebody at Sterling Hill, 2.5 miles away in Ogdensburg.

By the early 1950s, the Franklin mine was nearing the end of its life, and in 1954 the last of the ore was raised to the surface. Many in the community at that time wished to preserve the heritage of this great locality. Miners sold specimens to collectors out of their basements, scientific papers on the deposits continued to be published, and, in 1959, a group of collectors banded together to form the Franklin-Ogdensburg Mineralogical Society (FOMS), still in existence today. One of the stated goals of FOMS from the start was to assist in the founding and support of a museum in Franklin dedicated to the local minerals.

Enter the Franklin Kiwanis club, which took on the challenge of creating just such a museum as a community project. Five years later, thanks to the efforts of the Kiwanians, some of whom were also FOMS members, the Franklin Mineral Museum opened its doors to the public.

**Start/End: Cedar Lake Camp, 570 Sawkill Rd., Milford, PA, 18337-7010**

**Overall drivetime/distance: 1HR 48MIN 66.3MI / Est. fuel cost: \$4.93**

## **Directions from Cedar Lake Camp to Sterling Hill Mine Tour & Museum**

1. Head out of camp and down the driveway. Then turn left going northwest on Sawkill Rd. toward Bridge Rd.
  - a. Then 0.21 miles 0.21 total miles
2. Take the 1st right onto Bridge Rd.
  - a. If you reach the Grand Army of the Republic Hwy. you've gone about 0.2 miles too far
  - b. Then 0.16 miles 0.37 total miles
3. Turn right onto Grand Army of the Republic Hwy./US-6 E. Continue to follow US-6 E.
  - a. Then 4.88 miles 5.25 total miles
  - b. Stay straight to go onto E Harford St./US-209 S.
  - c. Then 0.85 miles 6.10 total miles
4. Turn left onto US Highway 206/US-206 S. (Portions toll) (Crossing into New Jersey).
  - a. US Highway 206 is 0.2 miles past Old Bridge Rd.
  - b. Then 16.02 miles 22.13 total miles
5. Stay straight to go onto US Highway 206/NJ-15. Continue to follow NJ-15.
  - a. Then 4.61 miles 26.74 total miles
6. Turn left onto Houses Corner Rd.
  - a. Houses Corner Rd is 0.5 miles past White Lake Rd.
  - b. If you reach Layton Ln., you've gone about 0.2 miles too far
  - c. Then 2.47 miles 29.20 total miles
7. Turn right onto W. Mountain Rd.
  - a. Then 0.94 miles 30.14 total miles
8. Take the 3rd left onto Sterling Hill Rd.
  - a. Sterling Hill Rd is 0.1 miles past Skyline Dr.
  - b. If you reach Greenfield Hl., you've gone about 0.7 miles too far
  - c. Then 0.78 miles 30.92 total miles
9. Sterling Hill Rd. becomes Passaic Ave.
  - a. Then 0.25 miles 31.17 total miles
10. Turn right onto Plant St.
  - a. Plant St. is 0.1 miles past Arch St.
  - b. If you reach Center St., you've gone about 0.2 miles too far
  - c. Then 0.02 miles 31.19 total miles
11. Sterling Hill Mine Tour & Museum, 30 PLANT ST. is on the right.
  - a. If you reach Sterling Pkwy., you've gone a little too far

Sterling Hill Mine Tour & Museum "Step into Earth Science"

This leg of your trip is: 46minutes · 31.19 miles



## **Directions from Sterling Hill Mine Tour & Museum to Franklin Mineral Museum**

Start of next leg of the route

12. Head out of Sterling Hill Mine Tour & Museum driveway and turn right going north on Plant St. toward Passaic Ave. This will be in the opposite direction from which you came from.
  - a. Then 0.02 miles 31.21 total miles
13. Plant St becomes Cork Hill Rd.
  - a. Then 2.11 miles 33.31 total miles
14. Turn right onto Church St./County Hwy-631.
  - a. Then 0.10 miles 33.42 total miles
15. Turn left onto Buckwheat Rd.
  - a. If you are on Franklin Ave. and reach Hospital Rd., you've gone about 0.1 miles too far
  - b. Then 0.13 miles 33.55 total miles
16. Take the 1st left onto Evans St.
  - a. Evans St. is just past Quarry Rd.
  - b. If you reach Taylor Rd., you've gone a little too far
  - c. Then 0.07 miles 33.62 total miles
17. Franklin Mineral Museum, 32 EVANS ST. is on the left.
  - a. If you reach Main St., you've gone about 0.3 miles too far

This leg of your trip is: 5minutes · 2.43 miles

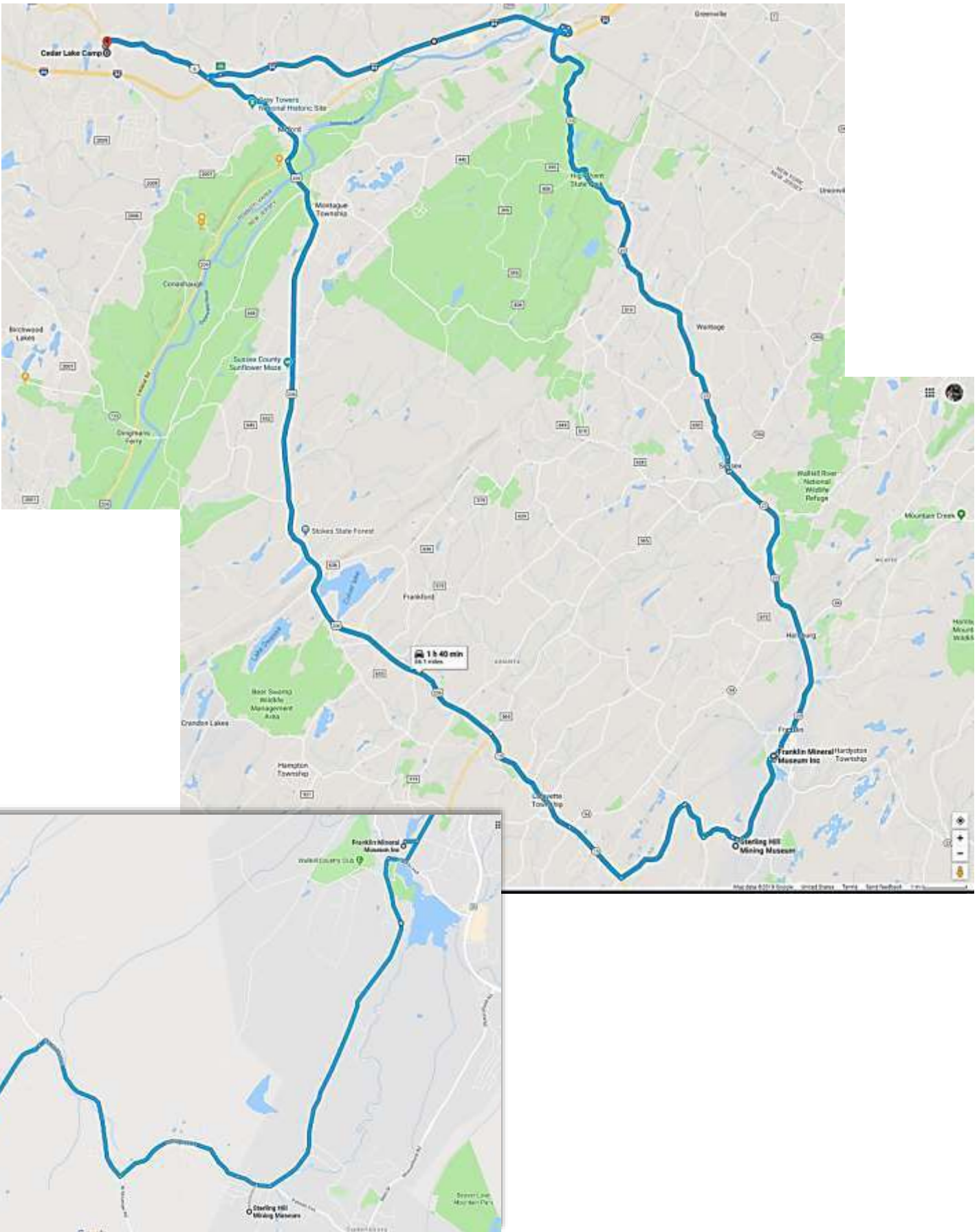
## Directions from Franklin Mineral Museum to Cedar Lake Camp

Start of next leg of the route

18. Start out going east on Evans St. toward Buckwheat Rd.
  - a. Then 0.07 miles 33.69 total miles
19. Turn left onto Buckwheat Rd.
  - a. Then 0.64 miles 34.33 total miles
20. Turn right onto High St.
  - a. Then 0.09 miles 34.42 total miles
21. Turn left onto State Route 23/NJ-23/County Hwy-517. Continue to follow NJ-23.
  - a. Then 6.83 miles 41.25 total miles
22. Turn left onto Loomis Ave./NJ-23.
  - a. Loomis Ave. is just past E. Main St.
  - b. If you are on Main St. and reach Harrison St., you've gone a little too far
  - c. Then 0.05 miles 41.30 total miles
23. Take the 1st right onto Mill St./NJ-23. Continue to follow NJ-23 (Crossing into New York).
  - a. If you reach Elizabeth Ave., you've gone a little too far
  - b. Then 12.57 miles 53.87 total miles
24. NJ-23 becomes County Hwy-15.
  - a. Then 0.32 miles 54.19 total miles
25. Turn right onto US Highway 6/US-6 E.
  - a. Then 0.14 miles 54.33 total miles
26. Merge onto I-84 W toward Scranton (Crossing into Pennsylvania).
  - a. Then 8.70 miles 63.03 total miles
27. Take the US-6 exit, EXIT 46, toward Milford.
  - a. Then 0.34 miles 63.37 total miles
28. Turn right onto Grand Army of the Republic Hwy./US-6 W. Continue to follow US-6 W.
  - a. Then 2.53 miles 65.90 total miles
29. Turn left onto Bridge Rd.
  - a. Bridge Rd. is 0.1 miles past Senate Rd.
  - b. If you reach Sawkill Rd., you've gone about 0.2 miles too far
  - c. Then 0.16 miles 66.06 total miles
30. Turn left onto Sawkill Rd.
  - a. Then 0.21 miles 66.27 total miles
31. Cedar Lake Camp, 570 Sawkill Rd, Milford, PA. 18337-7010, 570 SAWKILL RD. is on the right.
  - a. If you reach Honeywell Rd., you've gone about 0.4 miles too far

This leg of your trip is: 46minutes · 32.65 miles

JOE 2019 Information Packet for Mines, Minerals and Buckwheat Tour



JOE 2019 Information Packet for **Mines, Minerals and Buckwheat Tour**

Nearest Hospital: [Newton Medical Center](#), 175 High Street, Newton, NJ 07860

973-383-2121

Newton Medical Center's state-of-the-art Emergency Department features private treatment areas, a fast-track area for minor injuries and illnesses, and coordinated services with our lab and radiology departments, so patients receive care as quickly and comfortably as possible. We also have an on-site helipad that provides rapid transfer to Morristown Medical Center and Overlook Medical Center for additional treatment, when needed.

Directions from Franklin Mineral Museum to Newton Medical Center: <https://goo.gl/maps/WF8rHCmXrf82>,  
27 Min. / 13.4 Miles

Directions from the Sterling Hill Mining Museum to Newton Medical Center: <https://goo.gl/maps/g8Mmx1YTRbL2>  
23 Min. / 11.5 miles

