

CCLF Education Program – 7 Station Tours – as of 3/8/20

Stations:

1. First Room in the Museum – focus on lighthouse history 1848-1941
2. Second Room in the Museum – focus on lighthouse history 1941-present
3. Oil House – in front of door
4. 1st and 2nd levels of the Lighthouse
5. 3rd Level of the Lighthouse
6. Keepers Cottage location behind the Lighthouse
7. Keepers Cottage location NE of the Lighthouse

Assign docents to stations and retrieve any props needed for that station.

Divide the tour into groups, including students and adults (teacher should have done so prior).

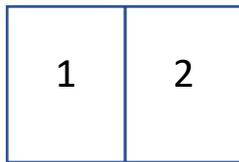
Assign and take each group to their first station, depending on assignment in table below.

Rotate every 10 minutes or so. For the first rotation, please welcome them before beginning.

Return props at the end of the tour.

CCLF Educational Tours – 7 stations

6
Flora & Fauna



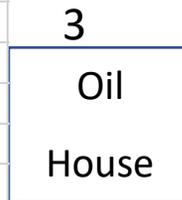
Museum



7
Lighthouse
Life

← 5 (level 3)

← 4 (levels 1&2)



Group Assignment (X) to First Station						
Stations	# of Groups					
	2	3	4	5	6	7
1	X	X	X	X	X	X
2					X	X
3		X	X	X	X	X
4	X		X	X	X	X
5						X
6		X	X	X	X	X
7				X	X	X

Note: Groups rotate in numerical order from initial station

Station 1 – First room in the Museum

1. This cottage is the same floor plan as the original Head Lighthouse Keeper's Cottage that stood here in 1894. They lived here with their families, but we use it as a museum, now.
2. Does anybody know why they wanted to build a lighthouse on Cape Canaveral back in 1848?
 - a. Shoals (shallow areas) off the coast as far as 13 miles off the point wrecked ships
3. The first lighthouse was built a mile away from here, near the ocean, in 1848 out of brick and was 65' tall
4. Problems – ships kept running into the shoals, but now it was because they were looking for the light and couldn't see it
 - a. The lighthouse wasn't tall enough to send light more than 10 miles before hitting the curvature of the earth's surface
 - b. The Winslow Lewis lamp was so poorly designed that it couldn't send light out more than 5 miles, anyway
5. Decided in 1859 to build a new, taller lighthouse next to the old lighthouse but it was not finished until 1868, after the Civil War.
6. Made in pieces out of cast iron, not brick. Each piece marked to make assembly easier
7. 151' tall, so could send light over 16 miles away
8. 1st Order Fresnel lens much better than old lamp, so could shine up to 22 miles away. Point out the chart of Fresnel lenses and point out that we had a 1st Order and how big it was.
9. Storms flooded the surrounding buildings and washed away much of the beach, so decided to move
10. Moved the iron lighthouse in 1893-1894 –in pieces with a mule called Nancy and a cart along a tramway. The light was relit at the new location on July 25, 1894. Two cottages also moved.
11. This uniform jacket is what the Keepers wore when not in their working uniforms.
12. These are pictures of some of the Keepers and their wives in the 1800s. Mills Burnham and his wife on the right. Their daughter Frances and her husband Henry Wilson on the left. He was an Assistant Keeper. They had other daughters, who also married Keepers. There weren't very many people living out here back then.
13. Lighthouses are all unique in the way they're painted and the light they shine so people can tell them apart.
 - a. Explain Characteristics and daymarks
 - b. Show the daymarks for Cape Canaveral and a few of the others on the print on the back wall by the gift shop

Station 2 – Second room in the Museum

1. Explain and show how a Fresnel lens focuses the light, using the lightbox. Let them try, too.
2. Vibrations from rockets damaged the Fresnel lens. Removed in 1993 and sent to Ponce Inlet Lighthouse Museum. Replaced with dual searchlight beacon
3. Show them the piece of the Fresnel lens in the case
4. Show them the lightbulbs and copper roofing in the case
5. The Lighthouse served as a good lookout tower during WW I and WW II
 - a. Point out binoculars
 - b. 6 ships sunk by German U-boats off the Cape in 1942
 - c. The Navy practiced bombing in this area and almost hit the lighthouse
6. Why the Cape was picked for Space Port
 - a. Launch out over the ocean and not populated areas in case something blows up
 - b. Not very many people living here in 1950
 - c. Near the equator so the rotation of the Earth gives rockets a boost
 - d. Coast Guard already owned 826 acres for the lighthouse
7. The first launch pads were built about ½ mile north of here.
8. The first launch was Bumper in 1950
9. The lighthouse has seen every launch and every cruise ship in port
10. Lighthouse sometimes used to watch launches in the early years. Wernher von Braun watched. Told not to watch from lighthouse – not considered safe.
11. Now everybody can tell their location by using GPS on their phones. Ships have special equipment to do the same at sea. But smaller boats don't, and technology sometimes doesn't work, so this lighthouse is still used as an active aide to navigation.
12. From a distance, people sometimes think the lighthouse is the rocket being launched
13. Show photos of the lighthouse with all the rocket launches
14. Show the Cygnus mission patch and how the lighthouse is in it.
15. (Once accent board is printed) Show the comparison of the LH with rocket sizes (when the board becomes available)

Station 3 – Oil House

1. Whale oil used in first lighthouse, then lard oil
2. This oil house wasn't built until the lighthouse moved in 1894, when they were using kerosene
3. Fuel very flammable, so didn't want to store in the lighthouse
4. Barrels of oil were hoisted to the 6th floor
5. From there Keepers had to carry several gallons of the oil in transfer cans up to the lamp room every day
6. They received shipments of oil by boat every 6 months or so
7. Lighthouse started using electricity in 1931, using generators
 - a. Front door cut to install generators on first level of lighthouse
 - b. Kerosene tanks replaced by 2 large fuel tanks for generators
8. Commercial electricity came in the early 1950s and the generators and fuel tanks were removed
9. Oil house also stored life-saving equipment, some hanging on the outside walls
10. The roof was blown off during a storm in the 1970s and not replaced for over 30 years because the building was no longer needed for oil storage
11. Before the ground floor door was cut in 1931, the only entrance was up the stairs to the 3rd level
 - a. They wanted the lighthouse to be watertight since it was built next to the ocean in 1868
 - b. They smeared duck fat between the plates as they were building it to seal it
 - c. The lighthouse never flooded, even though the nearby houses did, before the move

Station 3 Extra stories to be used, time permitting

Look at the windows in the lighthouse. They are unusual with their round shape and the rope-shaped ornamentation around each window is exceptionally unusual.

History of the Cape Canaveral Lighthouse, Frank Childers, page 47

In an interview in July 1994, Mrs. Florence Wilson Patrick, aged 85, told about the oil resupply vessel, Cypress, that came along the east coast to deliver the oil for the lamp:

“The captain would blow his whistle, and everyone would run over to the beach to help unload the oil. It was off-loaded into a smaller boat to make the trip to the beach. There were two five-gallon tins of oil strapped in wooden crates that had to be set into the surf and pushed to shore and then transported to the lighthouse by horse and wagon.”

Station 4 – 1st and 2nd Levels of the Lighthouse

1. 1st Level

- a. Working lighthouse
- b. Only lighthouse owned by the Air Force
- c. Light maintained by the Coast Guard
- d. Two concrete pads were placed on the floor to the right of the entrance for two generators used during early electrification before commercial electricity was available
- e. Radio beacon equipment was located on the west wall from 1931 to 1996. It was connected to an antenna constructed nearby. It sent out a Morse code signal (Z), unique to this lighthouse.
- f. Two water tanks to the left of the entrance stored rainwater collected by a gutter around the 2nd level – note the overflow pipe and the access pipe nearby.
- g. There are 176 steps up to the light.
- h. Brick lining added to make it stronger – also helps insulate
- i. When going up the stairs, note the Roman numeral assembly numbers on the stair column. Each piece of the lighthouse is marked, for easy assembly

2. 2nd Level Room on Right

- a. The 2nd, 3rd and 4th levels were designed as living quarters. Because of the Florida heat, the Keepers typically only stayed here during storms or as temporary quarters.
- b. This room was designed to be a kitchen / eating area. There was a cook stove on the left inside the door. The chimney went up through the ceiling and exited the lighthouse on the 5th level.
- c. Notice the wooden floors. Only the 3 levels designed as living quarters had wooden floors placed over the metal floors. All other levels were left as bare metal floors.
- d. Note the assembly numbers up by the beams

3. 2nd Level Room on Left

- a. This room was designed to be a bedroom.
- b. Note the signatures on the door glass (one was a Keeper).
- c. The grated holes in the floor were used as ventilation between levels

Station 4 Extra Stories (story for 1st level)

“We weren’t supposed to play inside the lighthouse, so my sister and I would go around to the back porthole window and crawl in so our Daddy could not see us. We would sit inside and sew doll clothes. Sometimes we would climb to the top of the lighthouse where we could have a bird’s eye view of the sandy roads, ponds and the ocean and beach.” [A Tribute to Florence Honeywell Patrick Child of the Light by Roz Foster \(Indian River Journal Spring/Summer 2009\)](#)

Station 5 – 3rd Level of the Lighthouse

1. 3rd Level
 - a. This was designed to be the main room and was the original entrance level.
 - b. The receiver you see here would have been used aboard a ship to pick up the lighthouse radio beacon you learned about on the 1st level.
 - c. Note the trap doors in the floor and ceiling. These were used to move heavy items between levels, with block and tackle. The davit outside the entrance door on this level was used to lift items up here from the ground.
 - d. To the left of the door there was a stove to heat the area during the cool winter months. Note the flue hole cover.
 - e. The black wall across from the stairs held sea surveillance radar and viewing scopes for tracking boats during early rocket launches. There was an antenna outside the lamp room.
 - f. Note the curvature of the doors to conform to the circular stairwell
2. Above 3rd level
 - a. The level above (4th) has two bedrooms.
 - b. Above that there are six, 16-foot high open areas with an open circular stair going up 96 more feet to the light.
 - c. The stairwell is only enclosed to the 5th level.
 - d. The last 6 to 8 feet going into the watch room is also enclosed. The Keepers would have to close the door to keep the draft from blowing out the light.
 - e. At this point you have only climbed 12% of the way to the top

Station 5 Extra Stories - 3rd level of the Lighthouse – to be used, time permitting

History of the Cape Canaveral Lighthouse, Frank Childers, pages 51-54

“The lighthouse was designed to withstand severe elemental pressures associated with the shoreline environment.”

In a report on a hurricane in 1888 “...the lighthouse swayed most alarmingly and a clock hanging against the wall in the lantern room had to be removed to save it from the vibrations.”

Mrs. Oscar Floyd Quarterman said that a hurricane in 1936 “...made the lighthouse wave so that it threw a can of kerosene off the bench in the lamp room.”

William Butler recalled that a lightning strike missed the lightning rod on top of the lamp room and put a 2-inch hole in the copper dome over the Fresnel lens assembly.

In September 1886, an earthquake, centered in Charleston, South Carolina was felt at Cape Canaveral. “The keeper reports that there was an earthquake shock at that station on August 31, 1886 at 8:58 P.M., standard time. It lasted about 2 minutes and sounded like far-off thunder, and appeared to be underground.” “Another slight shock was felt on September 3, at 10:40, both in the tower and dwellings. It was so strong as to shake a lot of putty from the frame of the lens and to stop the clocks in the tower and dwellings. The first of the shock seemed to be a tremor, increasing until it became an oscillating motion. The oscillation of the tower appeared to be about 10 inches, from southeast to northwest. The clock stopped at 9:30 p.m., sun time, corrected that evening. Its position was in the watch-room of the tower, facing nearly north...”

Station 6 – Keepers Cottage location behind the Lighthouse

Visual Aid – use the tri-fold poster from the lighthouse

1. When the iron lighthouse was moved here the keepers had to clear the land to make room for their houses and the brick walkways.
2. They also needed to grow some plants for food and to fish and hunt for meat.
 - a. Why did they need to do that? – no stores, roads or bridges to easily get supplies
 - b. Which plants did they need to grow for food? – corn (for corn bread and to feed chickens), cabbage, squash, beans potatoes, carrots, turnips, and (later) fruit
3. The native animals couldn't live on the land which had been cleared and now the keepers were also hunting them for meat.
 - a. Which animals did they hunt for meat? – deer, turkey, rabbit, racoon, bobcat, gopher tortoises
 - b. Most native animals hid and moved away from the keepers
4. Some of them became quite rare and are called “Endangered Species”
 - a. What are some examples of local endangered species? – gopher tortoise, scrub jays, some snakes, bobcats, all the sea turtles
5. A lot of the animals have managed to survive here and still live here but are hidden away.
6. The Air Force works hard to leave them enough land to live on and to maintain their habitats so they can survive.
 - a. The Air Force burns 500 acres every year to keep it clear for the scrub jays and to prevent wildfires. This is called “controlled burning”.
7. We also have some non-native animals who live here which can be invasive such as wild hogs and armadillos.
8. There are even plants call “Invasive non-natives”. Invasive means that they grow everywhere too fast and crowd out all the native plants.
 - a. Snake plant is one. It's called snake plant because it looks like a cobra standing up.
 - i. Indoors, it is very good for cleaning the air, but it needs to be kept in a pot
 - ii. All of those behind us started from on little plant that a keeper's family let loose.
 - b. Castor plants (behind the yellow flowers)
 - c. Brazilian peppers
9. The yellow flowers are native plants and called “dune flowers”.
10. These trees are native oak trees.
11. Many other native plants live on the station as well, but like the animals, they are hiding from people and lawn mowers.

Station 7 – Keepers Cottage location NE of the Lighthouse

Below is an outline of the topics that may be covered at this station. Select the ones you believe of most interest to the group. Unless otherwise noted, all quotes are from published interviews with Florence Honeywell Patrick.

1. Family stories

a. The story of Albert the lighthouse cat

Graphics: photograph of Keeper Honeywell’s beautiful daughters made about 1914-1916, photograph of Albert the cat – the story is on the back of the photo

b. Rattle snake

Graphics: photograph of Ben/ photograph of rattle snake

“We had cats and a dog one time we called Ben. One night we were staying at Grandmother Wilson’s and my mother went back to the lighthouse, and my sister and I heard our little dog howling outside the house. We went outside and looked under the porch and there was a rattlesnake under there, so we went down to my uncle’s house to see if he would come up to get him. We couldn’t see or hear that rattler no more that night. The next day he came out from under the porch with his ears just agoin’ up and down, and my sister got the gun and—BANG—shot ‘em”. (Florence Honeywell Patrick)

c. Motor Bike

Graphics: picture of Clinton P Honeywell on Motor Bike about 1919

Daughter Florence was frightened by the noise of the motor bike and would hide under the house any time her father rode the bike.

d. The Beach

Graphic: Photograph of a sea turtle on the beach

“Sometimes we would go to the beach which was about one mile from the lighthouse, and look for shells and splash in the clear ocean water. I remember how clear and beautiful that water was, and the sand was so soft and white—like sugar”

“Sometimes we would go down to the beach at night to watch the big turtles come out of the water. They would dig big holes with their back feet and lay eggs into it, and then turn around and go right back into the water” (Florence Honeywell Patrick)

2. Necessities

a. Shelter Graphic-Photograph of original houses for keepers

The government contract for building the first lighthouse at Cape Canaveral in 1848 included a house for the keeper. Another house was built in the 1850s. These buildings were destroyed by a hurricane in 1876. Two new houses were built in 1883. These two houses were moved to the new lighthouse site in 1894. After this move, a third house was built at the site for the “second assistant.” The houses built at the original site were in a style called “stick architecture.” (refer to graphic). The house built at the new site is known as “vernacular.” Meaning of a style based on local buildings and locally available materials.

b. Water

There was no fresh water available at the lighthouse site on the beach. At the original site on the beach, rainwater was stored in cisterns located near the houses. When the iron lighthouse was constructed in 1868 large metal vats were built in the first level to store rainwater. There were also cisterns built near the houses to store rainwater. Florence Honeywell Patrick who grew up at the lighthouse in the early 1900s describes the drilling of wells which produced “red water” and those which produced “white water.” Only after boiling was the “red water” usable, but it would turn clothes washed in it red. She does mention drinking the “white water” but says “it taste awful!”

c. Food

There were no grocery stores anywhere near the lighthouse. There were no towns nearby until Titusville was settled in 1868. The earliest lighthouse keepers had to go by boat to St. Augustine to purchase supplies. Even after the settlement of Titusville, there were no bridges across the Banana or Indian Rivers from the lighthouse to town until 1925. A trip to Titusville for supplies was a day-long trip. Most of the food for residents in and around the lighthouse came from hunting, fishing and gardening.

“We had a wonderful garden, and mother planted corn, beets, carrots and cabbages. We used cast nets to catch fish. Mother and Uncle would catch gopher turtles to eat.”

“My Uncle Quarterman killed a large black bear one time, hung him up in a tree and skinned him. We ate that bear meat! We also had plenty of ducks around.”

“My mother would collect huckleberries and make pies and puddings. She made jelly out of sea grapes too.”

“My grandmother Wilson had plenty of oranges and fruits...”

d. Clothing

“Mother would order cloth from Montgomery Wards and Sears & Roebucks [catalogs] to make our clothes.”

She [Florence Wilson Quarterman] ...remembers an Irish Peddler who arrived every now and then aboard a big houseboat which operated as a floating grocery store. “I’d open his pack and he’d always give me a little present, a handkerchief or something. And Mama would buy a piece of cloth.”

3. School

Graphic: School room at the lighthouse

“School was held right here at the compound. Dad [Clinton P. Honeywell] fixed some school desks and put them out in the storehouse and that’s where school was held. Dad had a teacher come over and stay with us at the house. Name of the lady school teacher was Virgie Richardson and a man teacher by the name of Sam Knutson.”

The students at this school numbered nine and consisted of the keeper’s children and the assistant keepers’ children.

The lighthouse tender supply ship which brought supplies to the lighthouse would also bring a large wooden box with brass hardware which contained a “library” for the keepers’ families to enjoy. There were books on many subjects as well as fiction books. This library would be traded for a new one whenever the tender arrived to renew supplies.

4. Mail

Keepers at remote lighthouses got their mail from the Lighthouse Tender or other passing boats. Cape Canaveral was located near the Banana River and so letters might also come by way of boats traveling on the River.

“Mail came from Merritt Island in a boat and then was delivered to the post office, wherever it was at that time. It kept moving around so many times.”

In the earliest years mail in wilderness Florida traveled by way of “barefoot mailmen” who used boats on inland rivers and walked up the beach to deliver mail. Henry Wilson held this job carrying mail sacks in his boat to the head of the Indian River, by backpack to the Mosquito Lagoon and then to Smyrna by boat. He was appointed postmaster when a post office was created at Cape Canaveral in 1881 and served in this job until just before his death in 1916.

5. Lighthouse Keeper Duties and Tasks

Graphics: The Lens with lamps and wick*

Why were keepers nicknamed “wickies?”

- Light the lamp at sunset and put it out at sunrise
- Fill the lamp with fuel every evening before lighting it
- Trim the wicks every four hours during the night*
- Wind the clock mechanism as needed (to turn the lamp) during the night
- Clean and polish the Fresnel lens every morning
- Clean the windows of the lantern room every day
- Shine all the brass in the lighthouse
- Sweep the floors and the stairs of the lighthouse every day
- Clean windows (and sills) in the tower as needed
- Maintain all equipment at the lighthouse
- Keep an accurate inventory of all light station equipment and fuel
- Maintain the lighthouse logbook and record all daily light station activities and weather conditions
- Clean, paint, and repair all buildings at the light station as needed
- Lend assistance to ships and sailors in distress
- Provide visitors with tour of light station when appropriate
- Maintain a clean uniform at all times
- Do not leave light station at any time without permission