

# Turtle Tracking

## Learning Level

- 3<sup>rd</sup> – 5<sup>th</sup> Grade

## Duration

- 15- 20 minutes

## Objective

- Learner will explore how the New England Aquarium rescue team helps stranded sea turtles, the story of one rehabilitated turtle named Munchkin, and observe her locations on a graph from her GPS tag.

## Vocabulary

- Rehabilitated
- Endangered
- Entanglement
- Interpret

## Background

The New England Aquarium has played a major part in sea turtle conservation on the global scale with research and education. However, the aquarium has had an even larger impact on regional scale in New England. For more than 25 years, the New England Aquarium has partnered with Mass Audubon's Wellfleet Bay Wildlife Sanctuary, and by working together with other aquariums and intuitions along the east coast, thousands of **endangered** sea turtles have been rescued, **rehabilitated**, and released back to the ocean.

When humans visit the doctors with different illnesses and injuries, we all require different treatments and medicines, and we heal at different rates. This is the same for the rescued sea turtles that come to our animal care center in Quincy, MA. Sea turtles who found their way in our care might start their journeys with us when they wash ashore on the beaches of Cape Cod in the fall. MassAudubon volunteers walk along the beaches looking for sea turtles; and after stranded turtles are found, they are brought to our animal care center for treatments, which can last from several months to two years. The good news is most of the sea turtles (roughly 85%) that arrive at the Aquarium will recover and be released back to the ocean. When a sea turtle is believed to be ready for re-release back to the ocean, the aquarium will seek ocean water temperatures that are close to 75°F and take the turtle to that location for release. Depending on the time of year, this could be close to home in Massachusetts or as far away as Florida. Have you ever wondered where a sea turtle goes when they get released back into the ocean? What are they doing? Guess what, the scientists at the New England Aquarium wonder the

same questions! We hope the answers we learn from questions like that help us learn how to better protect them. Let's check out one of our recently released sea turtles.

### Meet Munchkin

Munchkin is the largest female loggerhead the New England Aquarium has ever rehabilitated! She was found by Mass Audubon volunteers at Great Island in Wellfleet, Massachusetts, and admitted to our animal care hospital on November 21, 2018 at 137 kg (303 pounds). Munchkin was admitted with significant wounds to her front right flipper and missing portions of her left hind flipper from a possible **entanglement**. After several months of top-notch care at our facility, she was released on July 2,



2019! She was fitted with a GPS satellite tag, so the aquarium could track her journey back home. So, how does a GPS tag work? The tag works by picking up a radio signal each time Munchkin surfaces. An antenna on the tag sends a signal to satellite that calculates Munchkin's position within 20 to 30-meter range. Check out her release: <https://www.neaq.org/about-us/mission-vision/munchkinsjourney/chapter-4/>

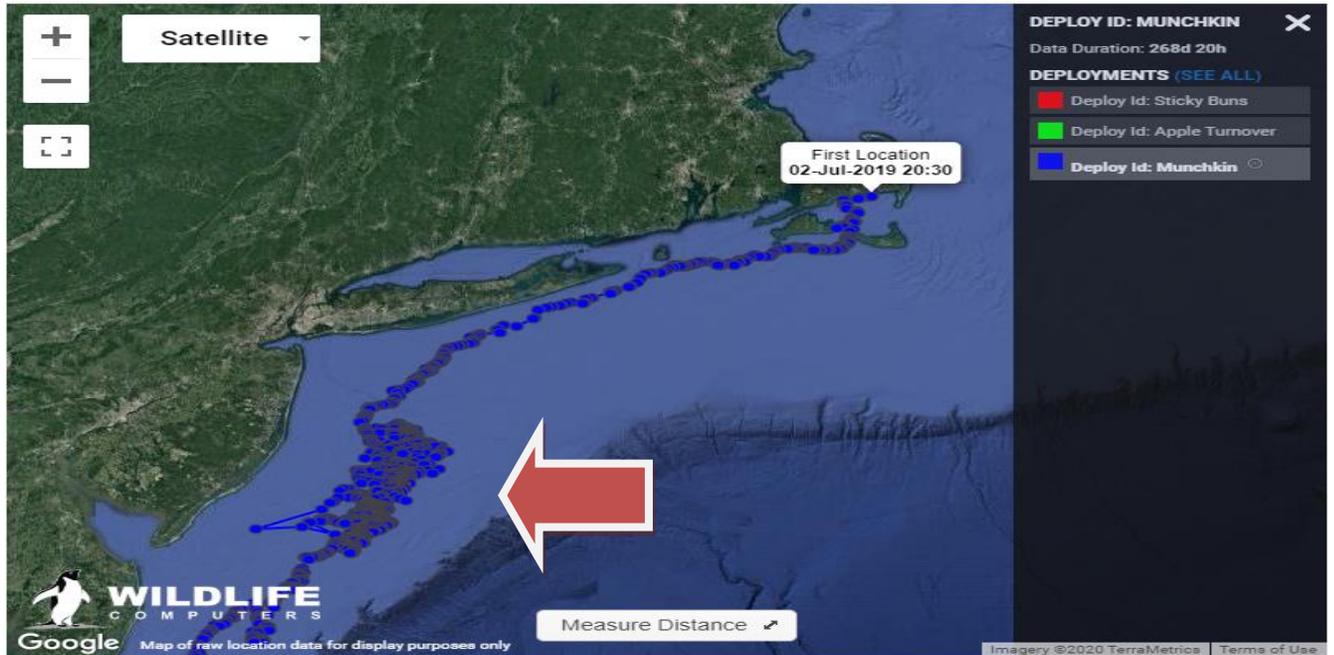
Before we get too far in Munchkin's journey, make some predictions about her journey.

- Once Munchkin was released back into the Atlantic Ocean from Cape Cod, where do you think she headed? North? South? East? West?

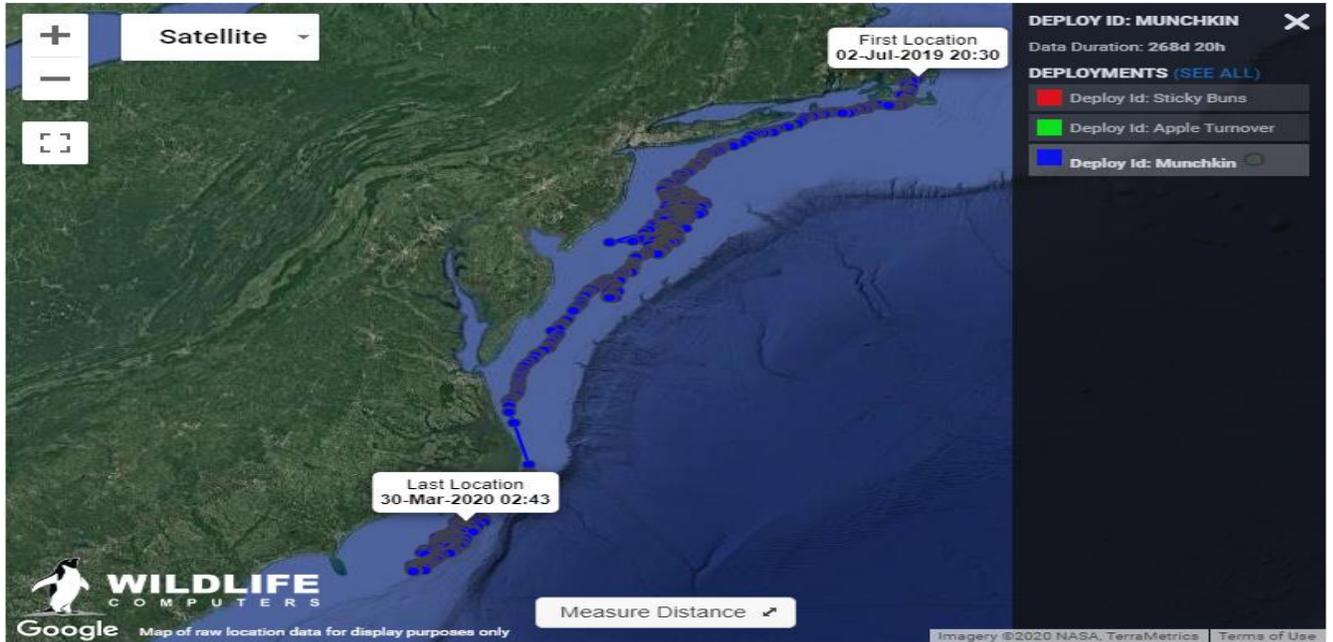
- Defend your prediction – why do you think Munchkin would go in that direction?

Let's *interpret* this data collected from the GPS tag:

Each blue dot is a “ping” from Munchkin’s GPS tag. The blue lines show her traveled distance between “pings.”



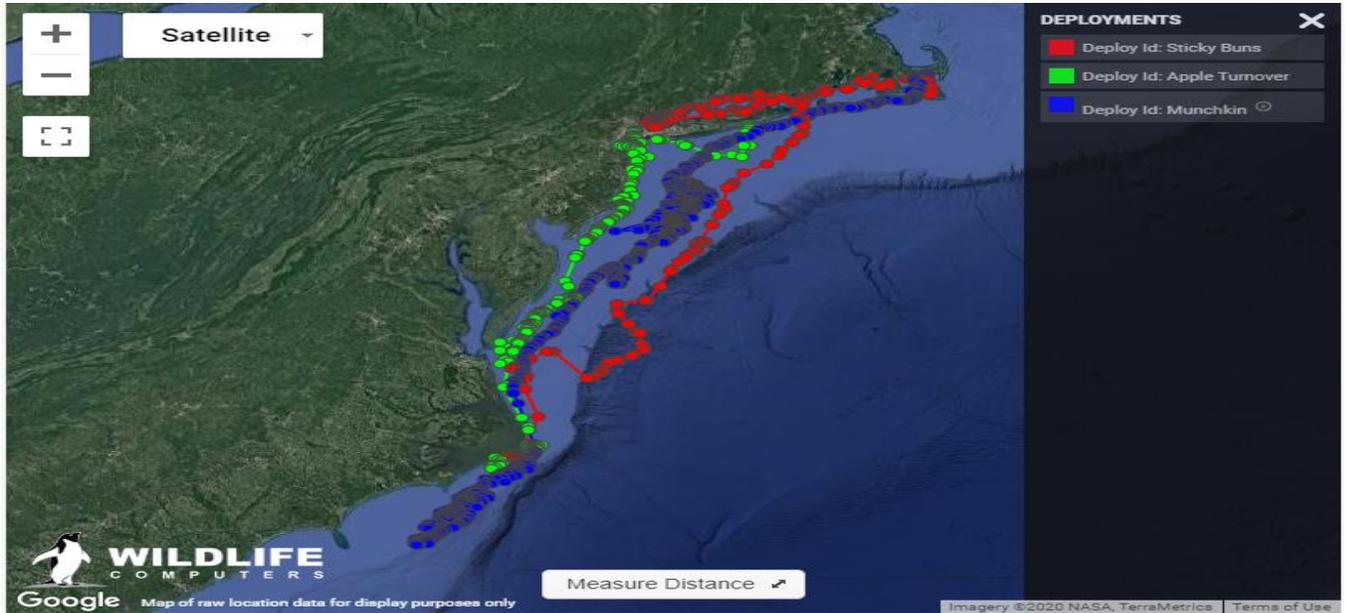
- Were your predictions of Munchkin’s journey correct? Did anything surprise you?
  
- Why do you think Munchkin had so many GPS records off the coast of New Jersey?(Labeled with the red arrow)
  
  
- Make another prediction, where might you find Munchkin today? Why? – Defend your prediction.



- Were your predictions of Munchkin location correct?
  
- What's her location? Do you think her journey down the coast was quick or slow?
  
- Do you think she will continue south? Why? -Defend your prediction.

How does Munchkin's journey compare to other rehabilitated sea turtle journeys from Cape Cod  
[Pictured here as examples are: Sticky Buns [in red] and Apple Turnover [in green]]

Do you see any similarities or differences? What can we learn from this data?



For Munchkin's full story and continue watching her journey: <https://www.neaq.org/about-us/mission-vision/munchkinsjourney/>

If you would like to learn more about general sea turtle behavior and migration: <https://conserveturtles.org/information-sea-turtles-general-behavior/>