

## **Public Programs**

*Sahm Theme: Shark Species!*

**Location:** Sahm Marine Education Center

### **Overview of Activities:**

#### Activities:

- ❖ **What Shark are you Personality Quiz:** Guests can take this personality quiz to determine what species of shark they are.
- ❖ **Shark Measure Up:** Guests can interact with this display so they can see the length of different shark species and compare them.
- ❖ **Shark Lab Data:** Guests can interact with the data that is collected by the Cal State Long Beach Shark Lab shark tracking buoy.
- ❖ **Shark Species Coloring Sheets:** Guests can learn all about different shark species and how they are adapted to certain habitats with our educational coloring sheets.
- ❖ **Deep Sea Shark Posters:** These posters detail the strange but cool adaptations that different deep sea sharks have.

#### Videos (1 per TV):

1. **Shark Species Video:** This video teaches about different sharks that are native to Southern California.
2. **Touch Screen Monitor:** Shark Lab Database

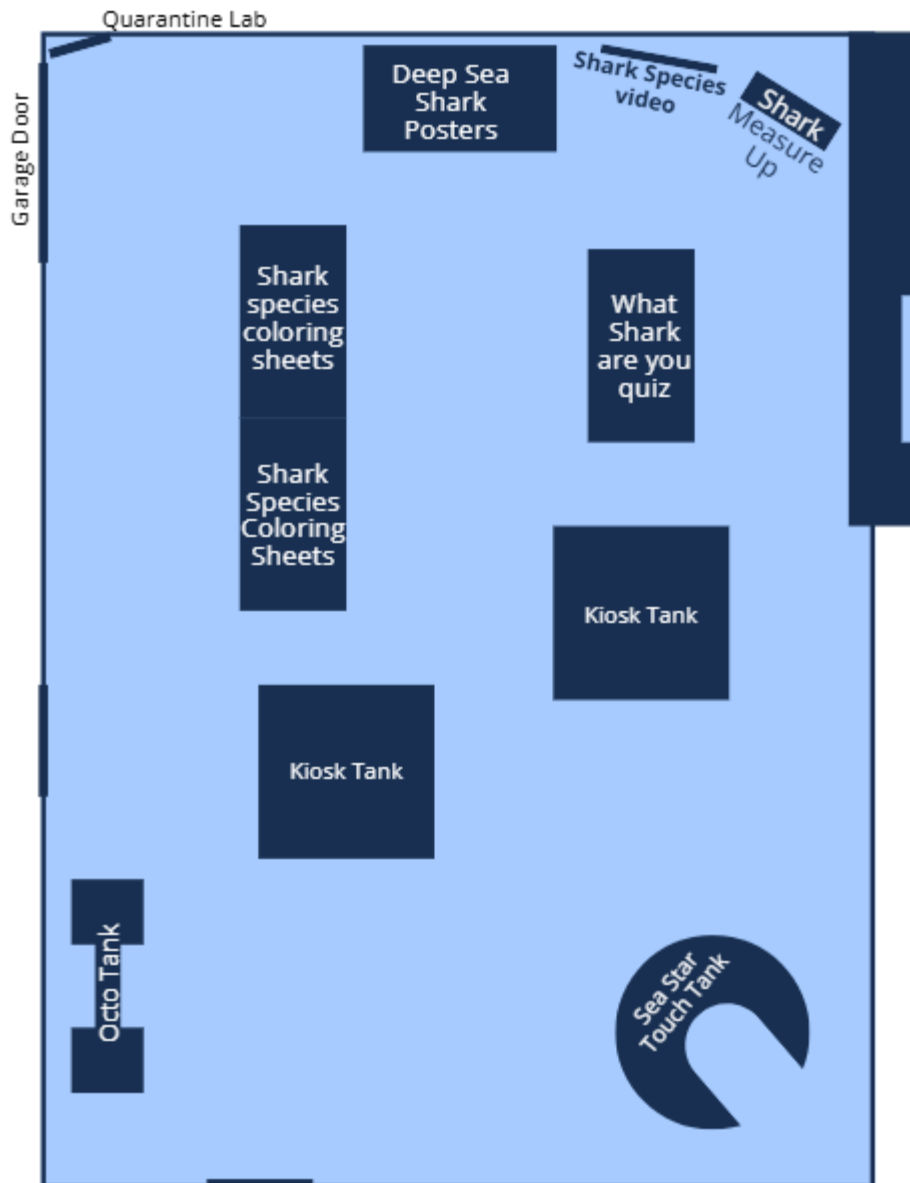
### **Performance Objectives**

The public will be able to...

- ❖ Learn about different local shark species
- ❖ Know the diets and lifestyles of different shark species based on their tooth shape
- ❖ Learn that there are many different species of shark of all different sizes

### **Setup**

- ❖ Move tables to indicated positions below
- ❖ Put black table linen on shark quiz tables
- ❖ Add chairs around coloring tables
- ❖ Have pens/pencils on quiz tables
- ❖ Have crayons on coloring tables
- ❖ Set out the deep sea shark posters on a table with linen
- ❖ Make sure the touchscreen tv is on
- ❖ Play the shark species video on the Sahm tv



## "What Shark Are You" Quiz

### Challenge

Guests take a personality quiz that tells them what species of shark they are most like.

### Materials

- ❖ Black table linen
- ❖ Quiz booklets
- ❖ Scratch paper and pencils

- ❖ TV Playing Shark Species Video

## Advanced Preparation

- ❖ Turn on TV playing shark Species video
- ❖ Place black linen on table
- ❖ Set out booklets, scratch paper, and pencils

## Procedure

### Engage:

- ❖ Ask guests if they want to find out what species of shark they are most like.

### Explore:

- ❖ Show guests how the quiz works...
  - Guests can answer all the questions in the booklet and add up the numbers they got for each question they answered. Example and instructions are in the booklet on page 1.

### Explain:

- ❖ Different species of sharks have different lifestyles and personalities.
  - Some species live in different habitats, eat different things, and have different temperaments, just like humans!
  - The shark species that someone could get on the quiz are...
    - **Great White Shark: assertive, dominant, misunderstood, mysterious**
    - **Mako Shark: fast, athletic, energetic, lone-wolf**
    - **Horn Shark: quiet, friendly/docile, chill, slow moving**
    - **Whale Shark: gentle giant, chill, vegetarian, goofy/funny, playful**
    - **Leopard Shark: extroverted, social, life of the party**
    - **Thresher Shark: shy, unique, quirky**

## Activity Resources

- ❖ Use information from other parts of this theme to give background information about each of the species.
- ❖ General info on different species of sharks. This source has many species, please look at the species listed above that are part of the quiz.
  - <https://www.sharks.org/species>

## Shark Measure Up

## Challenge

Guests can guess the lengths of different shark species and pull the cord to see if they are right. The cord goes to the length of the shark in real life.

## Materials

- ❖ Measure up display board

## Advanced Preparation

- ❖ Move Measure Up to specified location on the room layout

## Cleanup

- ❖ Move to area behind octo tank

## Procedure

### Engage/Explore:

- ❖ Ask guests if they can guess which shark is the largest? Which is the smallest?
- ❖ Show guests that they can pull the cord all the way out to see the length of the shark.

### Explain:

- ❖ There are many species of sharks in our oceans, all different shapes and sizes.
- ❖ 60% of all shark species are 4 feet or less.
- ❖ The smallest shark in the world is the Dwarf Lantern shark, reaching a maximum length of 7.9 inches.
- ❖ The largest shark in the world is the whale shark, reaching lengths of 62 feet!
- ❖ Sharks Featured in Measure Up:
  - Leopard Shark
    - 6' long, the largest of these sharks can reach 7'
  - Great White Shark
    - 16' long, the largest recorded have reached 20'
  - Thresher Shark
    - 20' long, largest was 24.9'
    - They live a long time and are slow to grow and mature
      - They live 19-50 years and mature when they are about 5 years old
      - Their distinctive long tails can make up 1/3<sup>rd</sup> of their body length
  - Hammerhead Shark
    - 15' but the largest can reach 18'
  - Horn Shark
    - 3.5' but the largest ca reach 3.9 ft
  - Basking Shark
    - 30' (average is 22-29) but the largest can reach 40'
  - Dwarf Lantern Shark
    - 7" (INCHES NOT FT) the smallest are 6.3" and the largest are 7.9"
  - Swell Shark
    - 3', largest is 3.5 ft but average is 2.7-2.8
  - Mako Shark
    - 10', can reach 12' largest is 14' but average is 7 for females and 10 for males)

## Shark lab Buoy:

### Procedure

#### Engage:

Ask guests if they want to see what researcher see when they track sharks

#### Explore:

- ❖ Show them the data from Cal State Long Beach Shark Lab (CSLB Shark Lab)
- ❖ The home page should have a map with all the buoys indicated in their locations
  - Below the map you can see the most recent individual shark that has pinged off one of the buoys. The box for the individual includes information such as...
    - Buoy Location
    - How many times that shark has been detected since being tagged
    - How ago it pinged
    - The depth at which it pinged
    - The temperature of the water
    - Etc..
  - When you select that individual's box information about the shark appears...
    - Male or female
    - Size at tagging
    - Etc...
- ❖ **Explain & Engage:** Discuss the following with the public...
- ❖ We use this information to educate guests about the lives of sharks.
  - Where they move
  - When they move
  - Why they move (temperature)
- ❖ Ocean Institute is the first place where the data has been publicly shared, otherwise it is solely used by researchers and lifeguards.
- ❖ Why do we want to know the movement of sharks?
  - This helps us keep people safe by educating them on when sharks are close to human activity.
    - increased human activity in the water/beaches (shark habitat) there is a higher risk of shark-human interactions. This data helps us protect both by being aware when sharks are in the area.
- Why do juvenile white sharks gather near southern California beaches?
  - They gather near here during the summer months when the water warms up. Juvenile white sharks feed on round ray, which also aggregate in shallow beaches. This coastal water also serves as protection from larger sharks, which stick to colder, offshore water.
- The buoy data uses the metric system so here are some conversions...
  - 1 meter = 3.28 ft

o 2 meters = 6.56 ft

o  $0^{\circ}\text{C} = 32^{\circ}\text{F}$

o  $15^{\circ}\text{C} = 59^{\circ}\text{F}$