

Giant Ocean Tank Census



Learning Level

3rd-Up

Duration

Variable ~20 mins

Objectives

Participants will learn various methods to taking a census of animals in a tank.

Vocabulary

- Census

Materials

- Pencil
- Paper
- Giant Ocean Tank Fishes Guide (attached)
- Timer or watch
- Device with internet access to view webcam (provided below)
- Optional: Camera, phone, tablet, or other device this a camera and a screen

Background Information

Every year, the aquarists do a **census** (or count) of the entire Aquarium—counting every single living thing in the building. Take a try at some of the techniques used to take a **census** of the Giant Ocean Tank.

Procedure

There are three ways you can try to take a census! Use our Virtual Visit: Inside the Giant Ocean Tank! (New England Aquarium): https://www.youtube.com/watch?time_continue=6&v=W2cmZ0htpiM (Note: This is a 51 minute video. Select a section to show with participant(s))

1. Snapshot

Take a picture of a group of fish, using a device that allows you to see the picture right away. Use this snapshot to count the number of fish of each species you can see in the image. Repeat two or three times. Write down your estimate below.

2. Timed Observation

Choose one species that swims by to count. Time 1 minute. Count the number of members of that species you see in 1 minute. Repeat two or three times for the same species. Write down your estimate below.

3. Simple Count

For certain large animals, such as tarpon, barracuda, or turtles, we have very few individuals. Watch to see if you can tell these individuals apart, and count them all this way.

SPECIES	NUMBER (ESTIMATE)	TECHNIQUE USED

Giant Ocean Tank Census

Adaptations & Extensions

- Use different reef tanks, such as the Indo-Pacific Reef Tank. Indo-Pacific Coral Reef Exhibit Video (New England Aquarium): https://www.youtube.com/watch?time_continue=7&v=2oq79441l8s (Note: This is 45 second video, but is a good pair with other webcams)
- Try different webcams, such as the National Aquarium's Blacktip Reef (<https://www.aqua.org/Experience/live>) or Explore.org for any number of fun webcams (<https://explore.org/livecams>) Note: When using LIVE webcams, there are times when nothing is taking place. Have a backup plan, or select a webcam that says "Highlights" so there will be organisms present.
- Take a census of your house! What animals live there (people are animals too!)

Discussion Questions

- Would this work using your window as the "webcam"?
- Is it easier or harder to get a census of animals in an enclosed space, like a tank, or the open, like out a window?

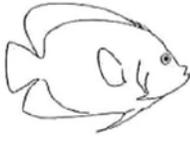
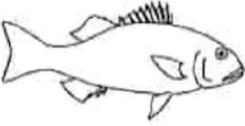
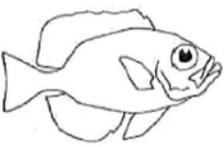
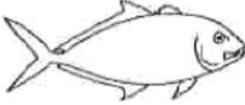
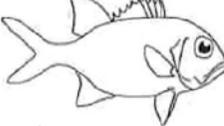
Major Bony Fish Families of the Giant Ocean Tank

Take a look for members of some of these families of fishes* (scientific names in parenthesis.)
What do you notice that helps you place that fish in its correct family?

Pay close attention to tail shape, body shape and fin shape.

Please note: Images are not to scale. Many of these families vary in size.

Many of these same families are also found in the Pacific Reef Community tank on Level 1.

 Damsel fishes (<i>Pomacentridae</i>)	 Butterfly fishes (<i>Chaetodontidae</i>)	 Angelf fishes (<i>Pomacanthidae</i>)	 Snappers (<i>Lutjanidae</i>)
 Grunts (<i>Haemulidae</i>)	 Bigeyes (<i>Priacanthidae</i>)	 Surgeon fishes /Tangs (<i>Acanthuridae</i>)	 Wrasses (<i>Labridae</i>)
 Jacks & Pompanos (<i>Carangidae</i>)	 Parrot fishes (<i>Scaridae</i>)	 Groupers (<i>Serranidae</i>)	 Drums (<i>Sciaenidae</i>)
 Trigger fishes (<i>Balistidae</i>)	 File fishes (<i>Monacanthidae</i>)	 Porcupine fishes (<i>Diodontidae</i>)	 Box fishes (<i>Ostraciidae</i>)
 Tarpon (<i>Megalopidae</i>)	 Needle fishes (<i>Belonidae</i>)	 Flounders (<i>Bothidae</i>)	 Soldier fishes & Squirrel fishes (<i>Holocentridae</i>)

*Fishes vs fish: The plural of a group of individual fish is fish (e.g., there are 10 fish in that tank).
The plural of a grouping of fish species is fishes (e.g., we have three species of parrotfishes in this tank).