

**You will need:**

- Clipboard
- Pencil
- Two different colors of pencil/marker

# Penguin Distribution

As you go up the ramp around the Giant Ocean Tank, turn around to look down into the penguin exhibit. From this vantage point, you can see where each penguin is.

**Notice** that the three species of penguin are in different areas of the exhibit, separated by gates. For this activity, you may choose to observe one or both species of penguin.

**Early in your visit**, look down into the penguin exhibit with the map on the other side of this page. Count the number of penguins on each island and each water area and write that number in the correct location on the map. Make a few notes about the behavior of the penguins and the conditions around the exhibit.

**Toward the end of your visit**, return to the same spot. Count the number of penguins in each area and write that number in a different color. Again, make notes about the behavior of the penguins.

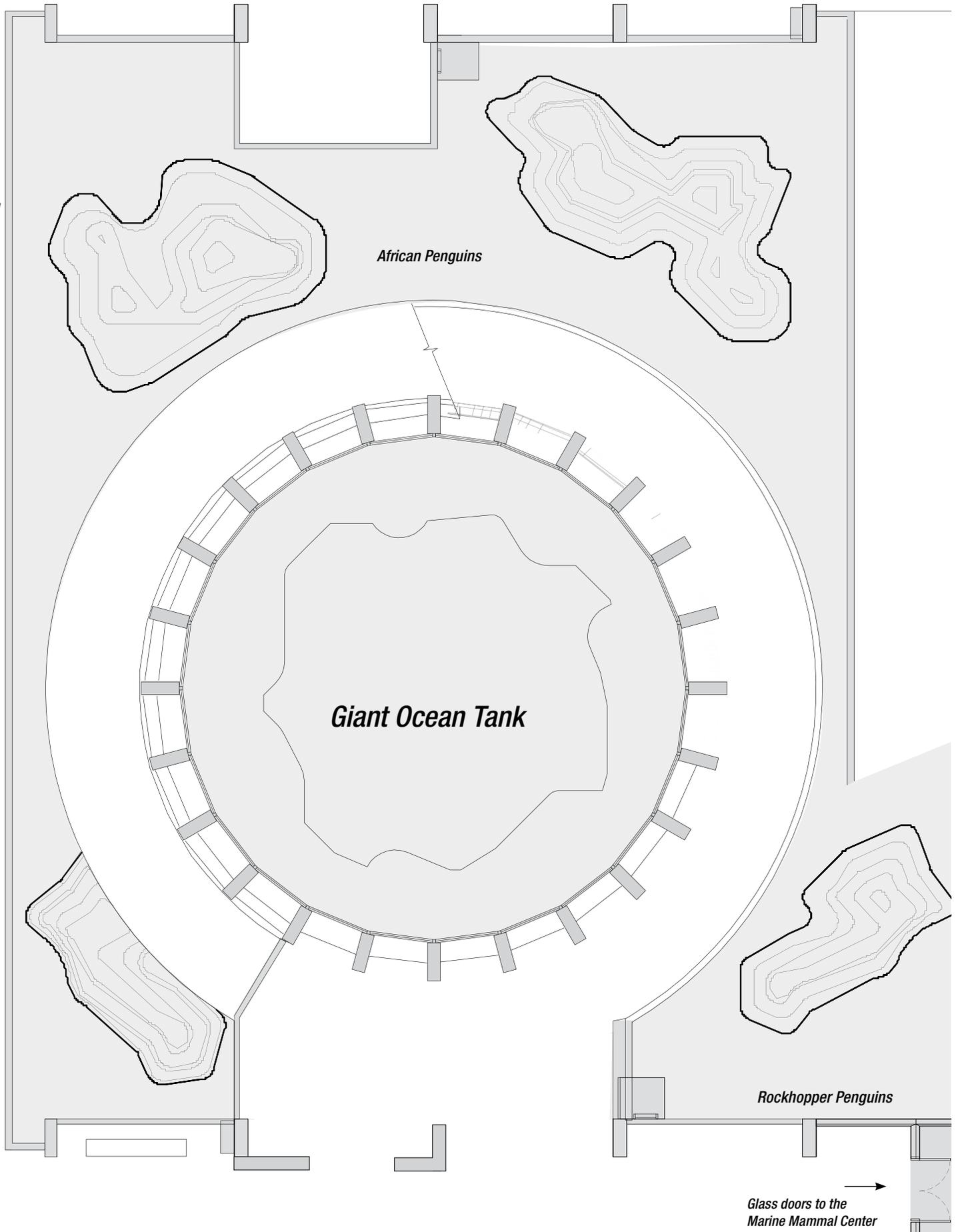
<b>Observation 1</b>	<b>Time:</b>	<b>Observation 2</b>	<b>Time:</b>
<p>African</p> 	<p>Rockhopper</p> 	<p>African</p> 	<p>Rockhopper</p> 
<p>The penguins are mostly</p> <p>Is it feeding time?</p> <p>Visitors around the exhibit?</p> <p>Are there people in the water?</p> <p>Are the sprinklers on?</p> <p><i>Any other notes?</i></p>	<p>Active    Calm</p> <p>Yes        No</p> <p>Many      Few</p> <p>Yes        No</p> <p>Yes        No</p>	<p>The penguins are mostly</p> <p>Is it feeding time?</p> <p>Visitors around the exhibit?</p> <p>Are there people in the water?</p> <p>Are the sprinklers on?</p> <p><i>Any other notes?</i></p>	<p>Active    Calm</p> <p>Yes        No</p> <p>Many      Few</p> <p>Yes        No</p> <p>Yes        No</p>

**Advanced:** Choose one or more of the following extensions:

- 1) Compare the two species.
- 2) Draw 3 – 4 zones on each island and mark how many penguins are in each zone.
- 3) Learn how to tell male and female penguins apart and label your data. (Hint: it's the bracelets.)

*For an at-home extension, see page 3.*

←  
Glass doors  
where you  
first come in



African Penguins

Giant Ocean Tank

Rockhopper Penguins

→  
Glass doors to the  
Marine Mammal Center

# ***Penguin Distribution – At-Home Extension***

**When you get home, discuss or write about the following questions:**

- What differences do you see between the first and second observations?
- Why do you think these differences happened?
- If you were to come back at a different time of year, what do you think you might see?
- What other information would you need to help you explain the penguins' behavior?
- Based on the penguins' behavior, how would you design your own penguin exhibit?
- If you observed more than one species of penguin, did you notice a difference in their behavior?

## **Where do penguins live in the world?**

There are two citizen science websites that will show penguin observation data. Citizen science is any project that includes nonscientists (like you!) in the scientific process. In this case, citizen scientists report their observations all over the world. Explore these two sites and see if you want to get involved as well.

1. Visit <http://ebird.org/>
2. Click “Explore Data”
3. Click “Species Maps”
4. In the bottom, right-hand corner of the page, unselect the box next to “Surveyed Locations.”
5. In the box at the top of the page, enter “Penguin” and select a penguin species.
6. The places this penguin has been observed will appear—the darker the purple, the more observations.

1. Visit <http://www.inaturalist.org/>
2. Click “Observations”
3. In the box marked “Species,” enter “Penguin.” This will show all observations of all 18 species of penguin.
4. To see a specific species, click the “Species” tab in the dark gray box on top of the map.
5. On each species' page, you will see a map with their distribution and observations.