

Name: _____

(6-12)

MLML Open House Scavenger Hunt!

Before you begin, think about what you expect to find here today. What do you think MLML marine scientists study, and how? _____

1. **Ichthyology Lab:** What body part do we use to determine the age of a shark or skate and how?

We count the rings in their vertebrae. (Bonus: In bony fishes, we count the rings in their ear bones, called otoliths). _____

2. **Phycology Lab:** What are the three major divisions of marine algae (hint: think colors)? What is the name of the seaweed carbohydrate that is found in ice cream?

Red, brown, and green. Carrageenan _____

3. **Vertebrate Ecology Lab:** What marine reptile visits Monterey Bay? What does it eat?

Leatherback sea turtle. Jellyfish. _____

4. **Benthic Ecology Lab:** Find SCINI, the ROV. What is special about SCINI's shape, and how does this help SCINI do its job?

Its skinny (narrow) shape allows it to fit through small holes so it can study the water under the ice in Antarctica.

5. **Invertebrate Zoology Lab:** Visit the touch tank outside. What animal is most closely related to humans and why?

Tunicates are chordates like humans. (Phylum Chordata) _____

6. **Biological Oceanography Lab:** How do scientists use chromatography to study phytoplankton? _____

They separate different species of phytoplankton based on the pigments they produce _____

7. **Physical Oceanography Lab:** What is the force that causes currents to be deflected? In what direction does it cause water to move in the Northern and Southern Hemisphere? _

The Coriolis force. In the Northern Hemisphere, it causes currents to be deflected to the right. In the Southern Hemisphere, it causes currents to be deflected to the left.

8. **Chemical Oceanography Lab:** Which limiting element will trigger phytoplankton blooms if added to seawater? *Iron* _____

9. **Geological Oceanography Lab:** Why are there different colored layers in the sediment core from Monterey Bay, and what do the layers represent?

Different bands of these colors represent different environmental conditions

1) Black usually means anoxic (low oxygen) sediment, so lots of microbial respiration (very rich in life)

2) Brown means clay, so terrigenous (from land) material that was eroded from the coast and / or brought in from the rivers

3) Red = Ferrous Iron, so very oxic (oxygen rich) material.

10. **Seminar:** Attend one of our seminars. List the title, the speaker's name, and one new thing you learned: _____

Bonus: Find the squid display. What is the name of the largest squid in the world? (Brown tape on the floor).

Colossal squid

When you're done: What surprised you the most about what you saw today?

Return your pencil and show this completed sheet at the K-12 Ed Outreach table to get stamped off!