

# Ask the Ocean Experts

ACTIVITY: Preparing students for Skype™ visit with scientist.

GRADE LEVEL(S): \*K-8th



OVERVIEW: Brainstorm, organize, then generate questions for the science team.

DISCIPLINES: Science, language arts

OBJECTIVES: Students will be able to:

- Share their knowledge of gray whale, elephant seal, or vaquita natural history, research, and researchers.
- Brainstorm and discuss questions about the animals, research and researchers.
- Identify questions they can answer through their own investigation and research through books, Internet searches, and the emails from the scientists.
- Formulate questions to ask the scientists based on group discussions and in-class inquiry.

MATERIALS: • Paper, pencils, erasers

## WHAT TO DO:

Goal: Students will prepare a question or questions to ask the scientists during the Skype™ interview.

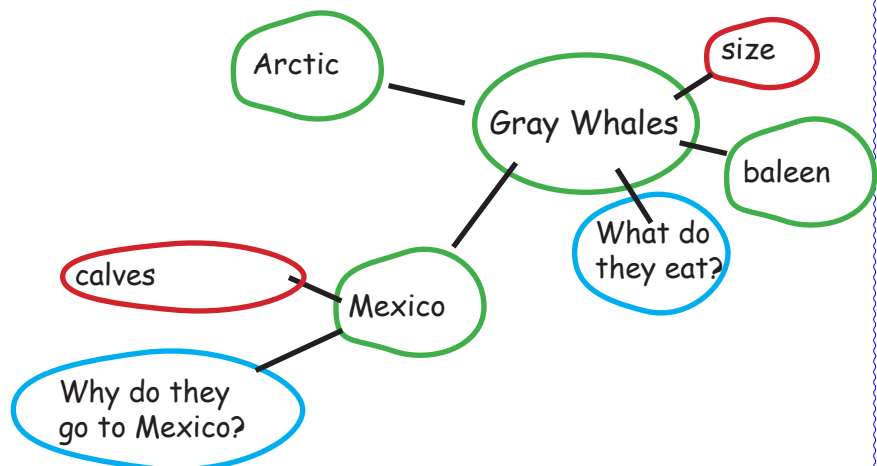
Though not required we like this activity because it helps kids think and discuss what they know and don't know in advance. This helps them think about what they might ask, rather than trying to come up with something on the spot.

1. To encourage classroom discussion, explain to the students that before researchers begin any research project or travel to their research location, they have thoroughly thought out, discussed with colleagues, and planned what they want to discover from the research. Just as scientists discuss and think about questions in advance, so will the class. The students will create two lists of questions. One group are those we can answer through their own investigation. The second are those we might need a scientist's help to answer.

2. Either as a whole class or in learning groups, have students share what they (think they) know about the antarctic environment, the animals, the research, and life as a researcher.

**You may want to get the kids started by brainstorming and mapping topics and questions relating to the research.** For example, write down what kids know about gray whales, elephant seals, vaquita, and being a scientist (SEE EXAMPLE GREEN CIRCLES).

Expand this by having students share what they know about each topic (SEE RED CIRCLES.).



Next, discuss and note what questions students might have about the topics. Add a couple of these questions to the map. (SEE BLUE CIRCLES.)

3. Either as a class or in cooperative learning groups expand this chart even further. Have students discuss and write down what questions they have or what they want to know more about. If it helps, have them start with, “I wonder...” or the “Who? What? When? Where? How?”
4. Have students write some or all of their questions on index cards or small pieces of paper.
5. As a class or cooperative learning groups, have students sort the questions into two groups. One group for questions that, with a little research, students can find answers to on their own. The second group of questions would be the ones students think they’ll need a *marine mammal* expert’s knowledge.
6. Have each group discuss the questions from the second group. As they discuss the questions, have them narrow the list down, finally choosing the ones they want the scientists to answer for them. (Unless quantity of students higher than 30, one question per student is probably reasonable. If more students, may want to ask 1 or 2 questions per group.)

#### NOTES:

- **Having students discuss and fine tune questions doesn’t mean your students have to know everything to ask a question. And, of course, there are no bad/wrong questions when your kids are inspired by the topic!** It’s not a matter of how hard the question is to answer, the important part is the discussion and thought behind the questions.
- The scientists are marine mammal experts. They might be able to answer some questions about other animals, but it’s best to stick with questions about the gray whales, elephant seals, vaquitas, their habitats, how the environment plays a role in the animals adaptations, how the animals interact, about the research, or life as a researcher.
- Some questions, such as “What are you studying?” will be answered by the scientists via their emails to the class. Track those questions/answers, too.
- Save the brainstorming map(s). After the mission, have students review their original thoughts on what they thought they knew to what they learned during the mission. Were there any misconceptions? Discoveries. Add to the original map or create a new one. How much larger would is their brainstorm map be at the end of the program? What other questions or observations did the cruise inspire?



**GO DEEPER:** Save the first group of questions for future projects or opportunities for the kids to investigate the answers. Students can go on-line to WhaleTimes, Oregon Coast Aquarium’s Oceanscape Network, NOAA, and other appropriate educational sites to learn more about ocean animals.

Post a list of the questions you think the scientists will answer or the students will figure out during the cruise. Write down the answers as they are discovered.