

Teacher Guide for ASK

April 2012: *How Many Fish in the Sea?*

This teacher guide was prepared by Betty Lou Askin, a retired educator who resides in Toronto, Ontario.

Objectives:

Introduction: Pre-reading activities:

- Let the students suggest what they think might be included in this issue of ASK based on the title.
- Ask them what they think is happening on the cover.
- View the Contents page and discuss the pictures and the article titles.

Scoops

Teddy Lab

- ❖ Why are veterinary students using stuffed animals?

Air Rhino

- ❖ Why were 19 black rhinos air lifted?

Piranha's Bark as Big as Bite

- ❖ Describe the noises made by piranhas.

Viking's Last Voyage

- ❖ How were the Vikings usually buried?

Nestor's Dock

- ❖ What was the good plan?
- ❖ Why did the plan not work?

Counting All the Fish in the Sea

Reading for information:

- ❖ What is a census?
- ❖ Where did the scientists take their census?
- ❖ What did they include in their census?
- ❖ Why were grids used?
- ❖ Why were robotic submarines used?
- ❖ What types of equipment used?
- ❖ Name some of types of ecosystems that were tested.
- ❖ Make a list detailing the Census.

Tuna Tag

Questions to use with this article:

- ❖ Why do scientists tag tuna?
- ❖ Why do they sometimes clip a tuna's fin?
- ❖ Describe the bluefin tuna.
- ❖ Tell about the bluefin's body temperature.

- ❖ What are scientists trying to learn about the bluefins?
- ❖ What tuna do we buy in a can?
- ❖ Explain TOPP.
- ❖ Why was the TOPP team surprised to learn about the bluefin?
- ❖ Describe what the TAG researchers discovered.
- ❖ How do the scientists learn about the health of tunas?
- ❖ What is the work of HMAP?
- ❖ What proof do scientists have that shows that the bluefins are approaching extinction?
- ❖ Describe the task of FMAP.
- ❖ What did the Census scientists discover?

Deep-Sea Research Party

- ❖ Describe some of the things that Daichi saw.
- ❖ What did Daichi learn?
- ❖ Describe the ROV.

Living Oceans

Reading for understanding:

- ❖ Have the students do a **picture walk** through this article.
- ❖ Do a **read aloud** with the information.
- ❖ Discuss the material.
- ❖ Let the students create a piece of art based on these creatures.

How Not to Count Fish

- ❖ Ask the students to create other possible scenarios about fishing similar to those on page 20.

Finding Creatures of the Deep

During or after reading use these prompts to focus on the content:

- ❖ What are hydrothermal vents?
- ❖ Who are included in the research team?
- ❖ Describe the process of making a seafloor map.
- ❖ How did Dr. Eva Ramirez-Llodra become a marine biologist?