

Name \_\_\_\_\_  
Date \_\_\_\_\_  
Class \_\_\_\_\_

## Dive and Discover: Expedition 10 Antarctica

Today's lesson will help you understand more about research currently being done by WHOI scientists in Antarctica. Go to [www.divediscover.whoi.edu](http://www.divediscover.whoi.edu). Go to "Choose an Expedition" (top menu) and click on "Exp. 10 Antarctica 2006". Read the information and fill in the blanks below.

Dive and Discover's Expedition 10 will explore one of the coldest, most \_\_\_\_\_ places on our planet—the \_\_\_\_\_ Ocean surrounding \_\_\_\_\_. Using \_\_\_\_\_ diving and other sampling techniques, scientists will study the mysteries of \_\_\_\_\_—transparent \_\_\_\_\_-like creatures that are important to the entire Antarctic food \_\_\_\_\_.

In the [Austral](#) summer—January to March—the waters around Antarctica support huge populations of tiny plant-like \_\_\_\_\_ that provide food for fish, squid, \_\_\_\_\_, seals, and whales. The key animals in this food web are \_\_\_\_\_, also known as [krill](#). These abundant, \_\_\_\_\_-like crustaceans feast on \_\_\_\_\_ and other small plankton, and are the favorite food of larger predators, like penguins and \_\_\_\_\_.

Salps are often overlooked, but are sometimes so numerous they seem to take the place of \_\_\_\_\_ populations. Salps are \_\_\_\_\_, tube-shaped animals that live in all oceans. Like krill, salps eat \_\_\_\_\_, so they often compete for the same \_\_\_\_\_. Salps feed by pumping \_\_\_\_\_ through their \_\_\_\_\_ bodies and \_\_\_\_\_ phytoplankton out with an internal filter net.

In the last thirty years, scientists have observed an overall decrease in the numbers of krill and an increase in numbers of salps in the waters surrounding Antarctica. What may this shift in abundances be related to?

---

---

---

Name **two** types of research that will be done on the salps once they are on board:

---

---

---

---

---

---

There will also be study of whale g\_\_\_\_\_ based on whale bones!!

Now click on **Daily Updates** and choose **one** date to read about. Fill in the information for that date:

Date chosen \_\_\_\_\_

Title for the day \_\_\_\_\_

Air Temp \_\_\_\_\_

Brief summary (2-3 sentences) about that days information (Skim the whole selection before writing):

---

---

---

---

---

---

---

---

Click on the **Slideshow**. Write about two slides you viewed:

---

---

Go back to the **Daily Update**. Click on "What's to Eat"? What would you have eaten for lunch?

---

Now go to the **Mail Buoy** (on left menu or you can go to the bottom of the page and click on "today's responses"). Read through a few days questions and responses while you wait for other students to finish. Then do the quiz if you have time!

### **EXTRA CREDIT OPPORTUNITIES:**

You may choose one of the options below.

**OPTION 1: Make a 3-D ecosystem model.** Go to **Deeper Discovery** and click on "Antarctic Ecosystem". Read the information, then click on "Learn more". Click on Ecosystem. Again, read the information. Now click on both Summer and Winter Ecosystem interactives, and click on various red dots to understand the overall picture. Your task: Choose **one** season and construct a 3-D model based on the picture. (A shadow-box is one suggestion). You need to include seven different organisms in your model. Label each organism in some way (ex) with flags) and then attach a description sheet of each organisms role in the ecosystem. You can use information from the boxed descriptions on the web site, but put this in your own words. This is worth 3 extra credit points.

**OPTION 2: Send an email.** After reading all the Daily Updates, go to Mail Buoy and read all the questions submitted and responses so far. Come up with a question of your own for the crew or scientists, and bring it to class to be approved by me.

Now, from your home computer, go to your email program and type in the email address: [outreach@img.usap.gov](mailto:outreach@img.usap.gov) [If you are doing this with a partner, you each need a question- be clear what each student's question is and include your name by each]. Along with your question, you should mention that you are one of Miss Sheild's seventh grade students at Clarke Middle School in Lexington, MA. After you have checked the message over for content and spelling, sign the email with your name, and **send the email** message. **Print out** the email that you send with the date. Your question must be approved by Friday, March 3, and sent by Sunday March 5.

When you get a **response**, **print out** the message. Then **write a two to three sentence summary** expressing your feelings about the experience, and comment on the response you were given. This is worth 2 extra credit points.