

# Antarctica

*Cool science in action*  
**Term 4 2014**



The following 10 captioned images are from the LEARNZ *Antarctica* Field Trip for Term 4, 2014 based in Antarctica.



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# Areas covered by the Background Pages



**Antarctica.** Image: LEARNZ.



**Ice.** Image: LEARNZ.



**Antarctic Food Webs** Image: NIWA.



**Antarctic Marine Ecosystems** Image: NIWA.



**Living Under the Sea Ice** Image: Steve Clabuesch.



**Sea Ice Microbial Communities** Image: NIWA.



**Cool Science in Action** Image: Stephen Wing.



**Climate Change** Image: Public domain.



**Climate Change and Antarctica.** Image: LEARNZ.



**Antarctica is the coldest, driest, windiest and highest continent on Earth. It is about fifty times the size of New Zealand and is almost completely covered in ice.**

Image: LEARNZ.

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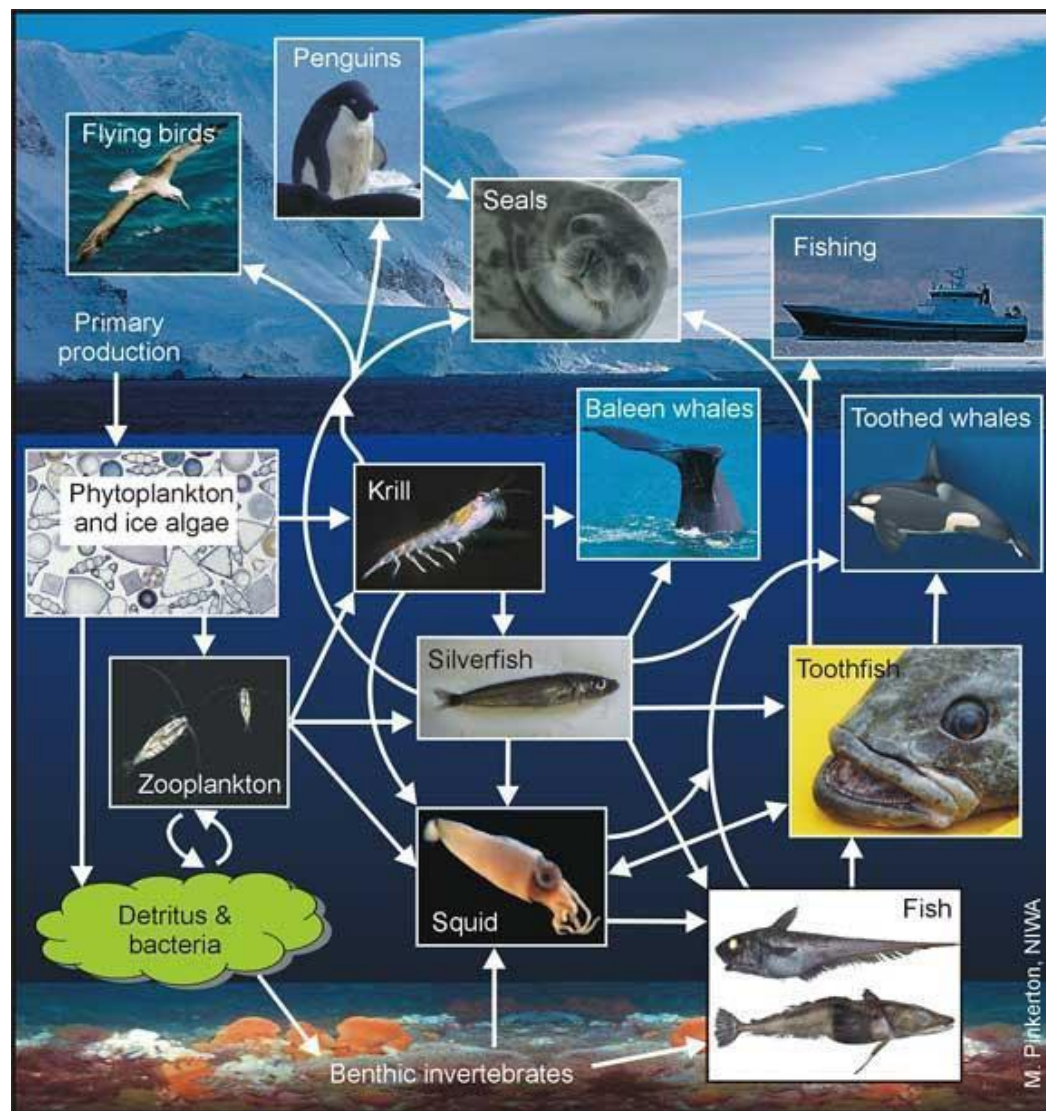


**Antarctica contains more than 90% of the world's ice. This ice is present as ice sheets, ice shelves and sea ice.**

Images: LEARNZ.

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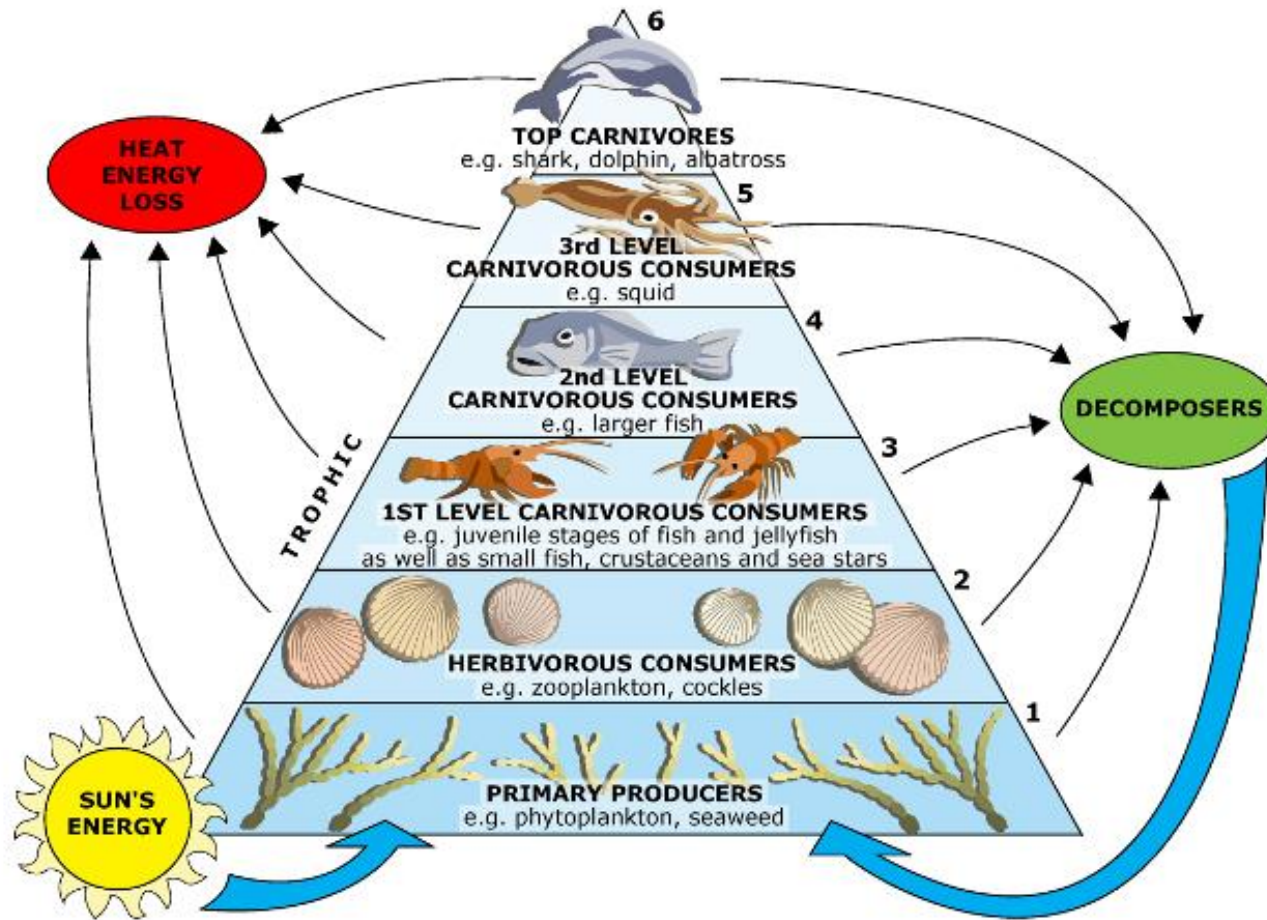


**Antarctica supports a wide range of organisms from algae to large animals. All these organisms are interconnected within a food web and rely on each other for survival.**

Image: NIWA.

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Organisms in food webs are commonly divided into trophic levels. These levels can be illustrated in a trophic pyramid where organisms are grouped by the role they play in the food web. Image: University of Waikato

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**The Antarctic environment is harsh and plants and animals need to have special adaptations to survive. Most of the animals that live on land in Antarctica are microscopic. The ocean surrounding Antarctica is a much richer source of food and supports a much higher level of biodiversity.**

Image: Rod Budd, NIWA.

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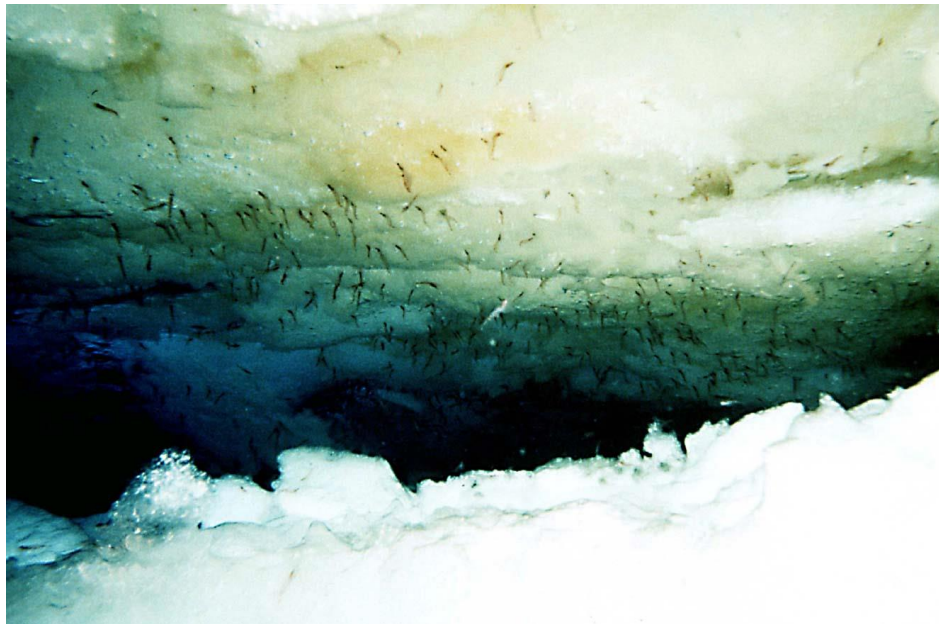
**Organisms that live under sea ice around the coast of Antarctica must be able to survive long periods without light due to the presence of sea ice.**

Image: Steve Clabuesch.

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**The Antarctic sea ice supports a community of microorganisms that play an important part in the Antarctic marine food web. This community is called a Sea Ice Microbial Community or SIMCO.**

Image: Public domain.

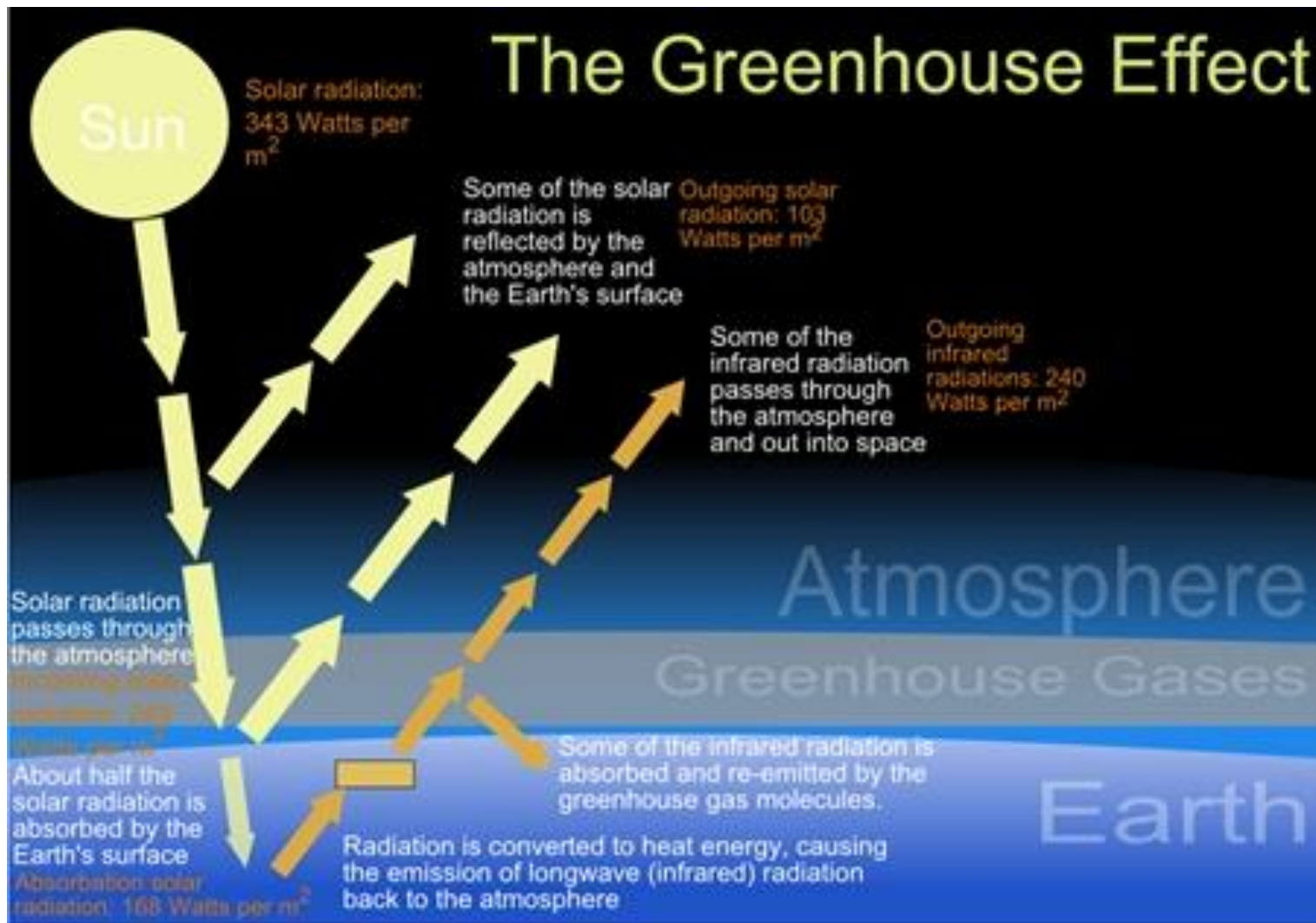


**During this field trip you will be following the work of Otago University scientists as they collect data about sea ice microbial communities and how they contribute to food sources relied upon by fish, penguins and seals.**

Image: Stephen Wing.

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Climate is a description of long term weather patterns. Climate can change naturally but recent rapid changes in climate have been caused by people increasing greenhouse gases in the atmosphere.

Image: Public domain.



**Climate in Antarctica is of interest to scientists because increases in temperature will impact on wildlife and cause sea level rise as ice melts.**

Image: LEARNZ.

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