

## **Antarctica Video Answers**

**Friday 7 November**

### **1. Weddell Seals**

Make the most of your last day in Antarctica by heading out on the skidoo in search of seals.

1. Where did you find the Weddell seals?
  - At Turtle Rock
2. Why did you not drive closer to the seal colony?
  - You walked the last 200 metres so that you did not scare the seals with the skidoo
3. Why do you think the seals are here?
  - Because there are cracks in the sea ice and Weddell seals live a long way south into McMurdo Sound

Next step learning: Find out more about Weddell seals and their behaviours.

### **2. Weddell Seals in the Antarctic Food Web**

Catch up with Steve Wing in the Weddell seal colony and find out how these seals have adapted to life in Antarctica and how they fit into the Antarctic marine food web.

1. What adaptations do Weddell seals have that help them to survive in Antarctica?
  - They have special teeth to chew through the ice or keep holes in the sea ice open (so they can breathe between dives)
2. What do Weddell seals eat and how do scientists know this?
  - Fish including Antarctic tooth fish and squid. Scientists know this from observing seals and chemically analysing their scat
3. Why is Steve interested in Weddell seals?
  - Because they will show links in the marine food web in areas with persistent sea ice which is the ecosystem that Steve is studying

Next step learning: Find out what threatens the Antarctic Tooth fish and why this is of concern for the Antarctic marine ecosystem.

### **3. A Week of Cool Science in Action**

Join Steve Wing back at Scott Base and think about the science work that has been done this week and why it is important.

1. What is at the base of the marine ecosystem in McMurdo Sound in the Ross Sea?
  - SIMCO Sea ice algae (primary producer)
2. What has SIMCO been linked to and how is this link being measured?
  - SIMCO has been linked to benthic organisms that eat SIMCO and then other organisms at higher trophic levels such as fish, penguins and seals which eat prey that feeds on the SIMCO. These links are measured by chemically tracing elements from SIMCO through the food web.
3. What does Steve hope the outcome of this research will be?

- That the data his team collects will show connections within the Ross Sea Ecosystem and add to our understanding of this unique ecosystem that has largely been unmodified by people.

Next step learning: Find out more about the Ross Sea and what's being done to protect this ecosystem.

#### **4. A Special Antarctic Treat**

Come and see what Shelley has discovered in the ice of the Erebus Ice Tongue.

1. How might this cave have formed?
  - From sea water melting the glacial ice last summer when the sea ice broke out and melted
2. What is a crevasse and why do they make walking on glaciers dangerous?
  - A crack in the ice which can sometimes be covered in snow or thin ice which can collapse when you walk over it
3. Where might you find ice caves in New Zealand?
  - In glaciers such as in the Fox or Franz Josef Glaciers on the West Coast of the South Island

#### **5. Field Trip Summary**

Take some time at the end of the field trip to reflect on what you have learnt about Antarctica and the Antarctic marine ecosystem.

1. What have been the highlights of this field trip for you and why?
  - Answers will vary
2. What questions do you still have about Antarctica and how could you find the answers to these?
  - Answers will vary
3. Help your teacher to fill in the [online evaluation](#) form for this field trip?