Climate film >

Changing Ecosystems

Climate changes will impact eco-systems all over the world, with the Arctic being the hardest hit. Here we are already seeing obvious consequences such as warmer sea temperatures, melting sea ice, increased plankton production and relocation of species. In the longer term we can be faced with grim consequences the likes of which we currently have no overview.

Assignments to complete before you watch the film

1. What is an eco-system?
2. Give examples of five eco-systems.
3. What animal species are typical for the Arctic eco-system?
4. What do you think happens to the Arctic eco-system when the temperature rises?

Assignments relating to the film

1. Why has primary production increased in the Arctic Ocean in recent years?
2. How is animal life changing in the Arctic Ocean?
3. What consequences can be caused by ocean acidification?
4. In which ways is the ringed seal dependent on sea ice?
5. A warmer climate will lead to more snow or rain in the Arctic. This in turn can lead to snow melting later or earlier in springtime. Elisabeth Cooper has carried out an experiment to examine the consequences of snow melting later. Describe how she set up the experiment?
6. Describe how snow melting later affects plant life and the rest of the eco-system.
7. Describe how tundra participates in binding carbon, and how this can change if snow lies up on the tundra for a longer period of time than previously?

Intensified assignments

1. Write a short text that describes how abiotic factors have changed in the Arctic, and how this affects biotic factors. Feel free to make simple sketches or find images/photos that support the text.
2. Why do you think the polar eco-system is more vulnerable than eco-systems elsewhere in the world?