



Engaging the K-12 community in Adelie Penguin and climate change research using the internet to provide a virtual field trip to Cape Royds, Ross Island, Antarctica.

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Engaging students beyond the text book and standardized classroom science experiences, our education outreach project provides an opportunity to follow along as researchers in Antarctica track the lives of breeding Adelie Penguins at Cape Royds, Ross Island, Antarctica. Many teachers are unable to provide an out-of-classroom science experience for students, and long term field projects are beyond the scope of most school resources. Antarctica is a remote area of our world and not even on many wall maps hanging in classrooms. How then can we encourage and promote the next generation of STEM participants as well as educate people about the Polar Regions and their importance in the Earth system? Our team provides a virtual field experience for teachers and classrooms around the world, engaging students in the exciting world of scientific research while enhancing awareness of Antarctica's role in the Earth's system. Students keep a field journal as they follow breeding pairs of Adelie raising their chicks in this remote location. Daily photos of 6-8 penguin families are posted on the internet along with weather statistics, field notes and stories. From egg laying to chick fledging students graph foraging trips for the adults, length of egg incubation, breeding success and weather. Companion educational activities are provided for the teacher including classroom ready PowerPoint's about how penguins are coping with climate change, why the polar regions are the way they are, penguin adaptations and life cycles. Students are given an opportunity to submit questions to the researcher, design a flag to be flown at the research station and receive a postcard from Antarctica. Published research papers are re-written using vocabulary suitable for a 7th grader showcasing the results of our team's research explained in an easy to understand format.

Over 300 identified classrooms follow the project with much more taking part in the postcard and flag design project. Based on our web-metrics classrooms in over 15 countries follow the project. During the project's active time (Nov-Jan) the research website traffic is increased 250% which amplifies exposure to the published scientific papers of our team as well as links to other related scientific sites. Since our outreach project began we have increased traffic on our website more than 10 fold.