



Further Reading List for Public Lecture: The Big Antarctic Freeze

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The reading list can be found at: <http://www.geolsoc.org.uk/GSL-Lecture-Sept>

Background Articles & Society Resources

1. **The Geological Society's Themed 'Year of Carbon'** - <https://www.geolsoc.org.uk/yearofcarbon>
2. **Plate Tectonic Stories** - *to celebrate 50 years of plate tectonics, the Geological Society developed an online resource that shows how 20 sites in the UK and Ireland have been shaped by tectonic processes, highlighting other 'twin' sites across the world. Discover the similarities between the Yorkshire Dales & Antarctica* - <https://www.geolsoc.org.uk/Policy-and-Media/Outreach/Plate-Tectonic-Stories/Yoredales/Antarctica>
3. **Year of Carbon Infographics on carbon and climate change** - <https://www.geolsoc.org.uk/Education-and-Careers/Resources/Posters>
4. **Climate change: evidence from the geological record** – read the Society's statement on climate change, focussing specifically on the geological evidence: <https://www.geolsoc.org.uk/climate-record>
5. Watch our 2016 November Public Lecture on '**Climate change and Antarctica: the great ice sheet in the past, present and future**' by Bethan Davies - <https://www.geolsoc.org.uk/LL-November-16>
6. **Ice Sheets – What are they? How do they form? Why are they important for climate?**
National Snow & Ice Data Centre <https://nsidc.org/cryosphere/quickfacts/icesheets.html>
7. **Sea Level Rise. Why is it important? How fast is it happening? What causes sea level to rise?**
British Antarctic Survey Science Briefing <https://www.bas.ac.uk/data/our-data/publication/sea-level-rise-2/>
8. **Understanding Antarctica's role in climate change**
British Antarctic Survey Science Briefing <https://www.bas.ac.uk/data/our-data/publication/antarctica-and-climate-change/>
9. **Ice Sheets & Sea Level in the Earth's Past**
The Nature Education Knowledge Project <https://www.nature.com/scitable/knowledge/library/ice-sheets-and-sea-level-in-earth-24148940/>
10. **Fossil Thermometers for Earth's Climate**

<https://joidesresolution.org/wp-content/uploads/2017/08/Climate-Change-Highlights.pdf>

11. Why does our planet experience an ice age every 100,000 years?

ScienceDaily, 26 October 2016. www.sciencedaily.com/releases/2016/10/161026081537.htm

12. Has The Mystery Of The Antarctic Ice Sheet Been Solved?

ScienceDaily, 29 February 2008. www.sciencedaily.com/releases/2008/02/080228080541.htm

13. The strange science of melting ice sheets: three things you didn't know

<https://www.theguardian.com/environment/ng-interactive/2018/sep/12/greenland-antarctic-ice-sheet-sea-level-rise-science-climate>

14. The International Ocean Discovery Program - <https://www.iodp.org/>

Journal Articles

1. How Antarctica got its ice - *A complex set of interactions caused the rapid growth of the Antarctic ice sheet 34 million years ago.*

Caroline H. Lear, Dan J. Lunt. *Science*, Vol. 352, Issue 6281, pp. 34-35. 1 Apr 2016 DOI: 10.1126/science.aad6284.

2. Cenozoic Deep-Sea Temperatures and Global Ice Volumes from Mg/Ca in Benthic Foraminiferal Calcite.

C. H. Lear, H. Elderfield, P. A. Wilson. *Science*. Vol. 287, Issue 5451, pp. 269-272 DOI: 10.1126/science.287.5451.269

3. Contribution of Antarctica to past and future sea-level rise. DeConto, R. M., & Pollard, D. (2016). *Nature*, 531, 591. DOI: /10.1038/nature17145

4. Breathing more deeply: Deep ocean carbon storage during the mid-Pleistocene climate transition

Caroline H. Lear, Katharina Billups, Rosalind E.M. Rickaby, Liselotte Diester-Haass, Elaine M. Mawbey, Sindia M. Sostdian. *Geology*, 2016; G38636.1 DOI: [10.1130/G38636.1](https://doi.org/10.1130/G38636.1)

5. Contribution of the Greenland Ice Sheet to sea level over the next millennium. - *Simulations show that the Greenland Ice Sheet could disappear within a millennium if greenhouse gas emissions continue unabated.*

Andy Aschwanden, Mark A. Fahnestock, Martin Truffer, Douglas J. Brinkerhoff, Regine Hock, Constantine Khroulev, Ruth Mottram, S. Abbas Khan. *Science Advances*. Vol 5, No 6. 19 Jun 2019. DOI: 10.1126/sciadv.aav9396.