University of Oxford
St Edmund Hall

23 June 2026

From the Earth Sciences Tutors

We are writing to you now to let you know a little more about the first-year Earth Sciences course and how you may best prepare yourself for it. We're very excited to welcome you to university life. The first year course is divided into four parallel themes: (i) Fundamentals of Geology, (ii) Planet Earth, (iii) Maths, and (iii) Physics/Chemistry/Biology. Lectures and practicals take place in the Department of Earth Sciences. Field courses are also arranged by the department. For information about fieldwork, and essential equipment, see: www.earth.ox.ac.uk/teaching/undergraduates/field-courses.

The college provides a program of tutorials, in groups of 2-3 students. Your tutorials will be taught by the college's tutors, as well as a tutor dedicated to maths tutorials, and cross-college tutorials provided by various members of the Earth Sciences faculty.

What do to before coming up:
To be sure that you get off to a flying start, we encourage you to reinforce your understanding of Chemistry, and Physics where appropriate. Those of you who did not study one of these subjects at A-level should comprehensively revisit your GCSE notes or texts if possible. You may also wish to read key texts in Earth Sciences. Recommended titles are listed below.

We would like you to prepare a hand-written essay before the start of term, to bring to the first tutorial. The essay should be entitled: 'The Theory of Plate Tectonics' and should not exceed six sides of hand-written A4 (including diagrams). Where possible, describe the historical development of the theory (focusing on the scientific discoveries, not the people who made them), the main lines of observation that support it, and include a description of the main tenets of the theory. Treat this exercise like you would any piece of scientific writing. Read from texts available to you and make notes. Then identify the main points and thread then together in a narrative. Include hand-drawn diagrams that summarise the key concepts you wish to describe. Do not copy verbatim from sources (either online or books). Your main intellectual task is to read, understand, and synthesise information to produce your own work. You do not need to provide citations throughout your essay, although you may find it beneficial to include a list of sources at the end of your essay to refer to for your own revision.

Occasionally one of our freshers is fortunate enough to receive a sum of money from their school or from a relation with which to buy books for their course and writes to us to ask what they should buy. The best advice is to try not to buy anything before you arrive, as you may be able to buy good-condition books that are second hand. You are also entitled to £300 per year as an academic allowance from the college, including £100 per year for the purchase of relevant books. For those for whom it is awkward for one reason or another to postpone the purchase we list some texts that will be of use during your course.

We look forward to seeing you in October

Luke Parry, Benjamin Hess and Claire Nichols* (Earth Sciences tutors)

*N.B. Claire Nichols is on sabbatical for the academic year 2026-2027

Activities:
Some engaging Earth Sciences activities are available here: https://www.oxfordsparks.ox.ac.uk/scienceoutthere — understand volcanic eruptions, explore the climate history of Mars, and reveal how much rain fell on the dinosaurs.

Books:
- How to Build a Habitable Planet. Langmuir & Broecker 2012. Princeton University Press. — excellent and inspiring walk-through our understanding of planet Earth from its origins until the present. Even if you have read this, it may be worth reading again.
- Earth Materials: Introduction to Mineralogy and Petrology, C. Klein & A. Philpotts 2013. Cambridge University Press. - always wanted to know more about rocks, minerals and their formation? Dip into chapters of this book.
- The Solid Earth, C. M. R. Fowler, Cambridge University Press, 2004. - Understand the structure of the Earth, and how we know it.
- Structural Geology, H. Fossen, 2016. Cambridge University Press. - Understand geological structure from rocks through to tectonics and deformation.
- Introduction to Paleobiology and the Fossil Record, M. J. Benton & D. A. T Harper 2009. Wiley-Blackwell. Fossil and palaeontology