

Down to Earth
"Earth science learning for all"

Hot rocks!

Volcanoes & igneous rocks



Supported self study course Commencing January 2021 for 10-weeks

KEY INFORMATION

COURSE TITLE:	Hot Rocks! Volcanoes, igneous rocks & processes
LEVEL:	The course is designed for anyone interested in learning more about what lies behind the occurrence of volcanoes and their products
DATES:	The course commences on January 12 and runs for 10-weeks
DELIVERY:	The course will be delivered via a series of online or mailed tutorials, plus an opportunity to take part in a weekly Zoom session at 8 pm on a Tuesday
COURSE TUTOR:	Colin Schofield, assisted by Chris Darmon
CONTACT:	email: downtoearth@geosupplies.co.uk or tel. 0114 2455746

BACKGROUND

The tutor is a geology/geography graduate who has been working with Chris Darmon for the past 15 years. He has an extensive field experience in the UK and abroad over a 35 year career. Chris and Colin developed distance learning courses together over the past 10 years and this course was first delivered in 2014. Colin holds a masters degree in the provision of distance learning and has been instrumental in building up our Moodle platform and over the last year, during the pandemic, running Zoom sessions.

This course is a natural continuation of that work, with potential learners based anywhere in the UK and even beyond. It will be sent via email direct to you or you can do it by post with a complete set of printed papers mailed to you at the beginning of the course.. The course will be hosted on the free to use learning platform Moodle, with access by password. On Moodle we'll be hosting recordings of Zoom sessions for those unable to 'attend' during the live discussion. There are also many links to additional information on webpages, YouTube etc. New for this year we'll be supplying notes to aid your learning. Lastly of course there is the opportunity to join in discussions with other learners on this course.

OUR EDUCATIONAL PHILOSOPHY

Our aim is to provide a relaxed learning environment in which we can all learn both from the tutor and each other. We hope that everyone will want to complete the tasks we set you, though nobody will be insisting that you do. Feedback and positive encouragement will always be given - we want you to gain knowledge and confidence from everything you do! We encourage you to share ideas and experiences via Moodle. Once again, this is down to your choice - nobody will be insisting that you do.

To protect our materials, we must ask you to agree not to share them with anyone not enrolled on the course by any means, including email. This is a condition of you enrolling on this course.

THIS COURSE

The course begins with the ingredients, the chemicals that are available to make the minerals that go on to make igneous rocks. Over the following weeks we'll give you an introduction to all the main aspects of volcanoes and igneous rocks. We can't hope to cover everything, but by the end of the course you should have a fairly comprehensive understanding of the subject.

COURSE AIMS

- To understand how igneous rocks fit into the 'landscape' of the Earth
- To appreciate the rich variety of igneous rocks both extrusive and intrusive
- To understand the range of different types of volcanoes
- To understand the relationship between igneous processes and plate tectonics
- To outline some aspects of Britain's fiery past
- To appreciate the destructive power of volcanoes and how we monitor their activity



COURSE CONTENT

What follows is not intended to be prescriptive, but provides an overview of the topics to be covered in this course.

- **The ingredients of volcanic rocks** - a rummage into the Earth's chemical store to see what's available and how these chemicals come together to make minerals.

- **Volcanoes - more than just the Earth's safety valve** - an overview of volcanoes, their anatomy and how we classify igneous rocks.
- **Patterns on the Earth's surface** - examining the relationship between different igneous rocks and the Earth's plates
- **Volcanoes of the Pacific 'ring of fire'** - a look at some of the world's most violent volcanoes and their products in the Andes and SE Asia.
- **From Hawaii to Iceland, basaltic volcanoes** - an overview of the varied basaltic eruptions around the world and how they fit into the bigger picture.
- **Batholiths to tors, welcome to granites** - a look at the world of granites and their relatives.
- **Volcaniclastics, ugly word, interesting rocks** - a look at the ashes, tuffs and other 'volcanic sediments' that are of igneous origin yet behave like sediments.
- **Britain's volcanic past** - volcanoes in Edinburgh, Glencoe & Skye to name but a few!
- **Britain's intrusive past** - the granites of SW England, the gabbros of the Cullins and the peridotites of the Lizard, to name but a few!
- **Taming the monster** - a look at how we monitor volcanoes and manage volcanic eruptions using examples from recent times.

Everyone enrolling will receive a course timetable.

PRACTICAL POINTS

- To do this course electronically you'll need a computer or tablet with access to the internet. You'll also need a valid email address - please supply it at the time of enrolment. Units will be sent as pdf files. A broadband connection would be very helpful, but is not essential.
- To access Moodle, Colin will give you some simple instructions and a password.
- If you want to take part in our live Zoom presentations, you'll need to fit a camera and microphone to your computer. These can be purchased at very reasonable prices online and are easy to fit and use. If you use an iphone or a tablet these are already built in.

You are all invited to a live Zoom meeting at 8pm on Tuesdays during the course and to a introductory Zoom session the week before the course begins.

COURSE MATERIALS

Textbook: As a back up to this course we recommend that you purchase the book "Introducing Volcanology - a guide to hot rocks" by Dougal Jerram (Dunedin Press). £11.00 including UK postage

Igneous rocks: A set of 18 well chosen specimens covering all the major types and including a free igneous rock datacard £29.95 including postage in the UK.

THE COST

The online cost is £40.00 and covers the provision of all the online materials, Zoom meetings and tutorial support. If you want to have the materials in printed form, there is an additional charge of £20.00..

ENROLLING

To enrol on this course you can do so via our website:-

www.geosupplies.co.uk or you can ring us on 0114 2455746

You can also send a cheque to the following address (made payable to "Geo Supplies Ltd"):-

Geo Supplies Ltd., 49 Station Road, Chapeltown, Sheffield, S35 2XE

LOOKING FOR HELP?

If you have any queries, please don't hesitate to contact the tutor, Chris Darmon by email:-

downtoearth@geosupplies.co.uk or you can call: 0114 245 5746

