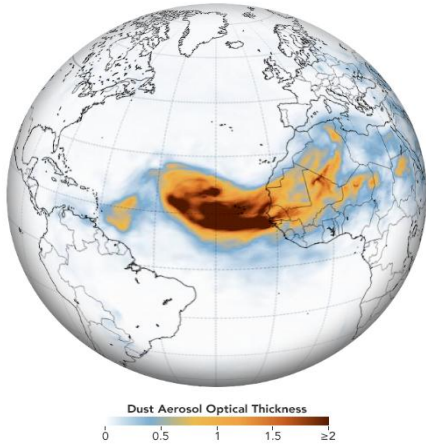


Dust Traverses the Atlantic Ocean



In a previous classroom presentation, it was mentioned that the main source of fertilizer for the Amazon rainforest is from the dust that is carried over from the Sahara desert.

This year the dust cloud was unusually far north and greatly affected the U.S., covering areas from New York, through the Atlantic coast to Texas. Headlines for days referred to the '**Godzilla**' dust storm, which was around 4,000 miles long and roughly a 2-mile thick layer in the atmosphere – welcome to our world here in Cyprus!

Every year, winds loft about 800 million metric tons of desert dust from North Africa—by far the planet’s largest source of airborne dust particles. The dust is often visible from space during the spring, summer and early autumn, when huge plumes of dry, dusty air from the Sahara Desert (the [Saharan Air Layer](#)) blow westward over the tropical Atlantic Ocean

Why is Sarah dust an essential fertilizer in some areas? For several hundred thousand years, the Sahara has alternated between desert and savanna grassland in a 20,000 year cycle caused by the [precession](#) of the Earth's [axis](#) as it rotates around the Sun, which changes the location of the [North African Monsoon](#). The Sahara dust contains the remains of dense vegetation and marine life from vast Saharan lakes, providing phosphorus, potassium, calcium and iron oxide minerals which fertilise both aquatic and terrestrial ecosystems.



Sahara Dust Traverses the Atlantic Ocean

Satellite Tracks Sahara Dust to the Amazon

Nature Live Online: Darwin's Fossils

Another online event at the *Natural History Museum*.



Find out how new technology is allowing us to understand and share the amazing fossil specimens he collected.

24 July 2020 10.30-11.15 BST

Join Museum scientist Lorna Steel to discover how Darwin's study of fossils during his voyage on the Beagle shaped his scientific thinking.

[Natural History Museum live online-Darwins Fossils](#)

Spreading rock dust on fields could remove vast amounts of CO₂ from air

It may be the best near-term way to remove CO₂, say scientists, *but cutting fossil fuel use remains critical*.

Volcanoes emit large amounts of Carbon Dioxide but this is normally only over a short period of time. Estimates of the volcanic contribution of CO₂ to the atmosphere vary between 0.3 & 0.6 billion metric tons per year, human carbon dioxide emissions are around 45 to 90 times greater. However, volcanoes may provide a solution to the increasing atmospheric levels of CO₂. Basalt is the best rock for capturing CO₂ and many mines already produce Basalt dust as a by-product, so stockpiles already exist. **Basalt** is a [mafic extrusive igneous rock](#) formed from the rapid cooling of magnesium-rich and iron-rich [lava](#) exposed at or very near the surface. More than 90% of all [volcanic rock](#) on Earth is basalt.



Spreading rock dust on farmland could suck billions of tonnes of carbon dioxide from the air every year, according to the first detailed global analysis of the technique.

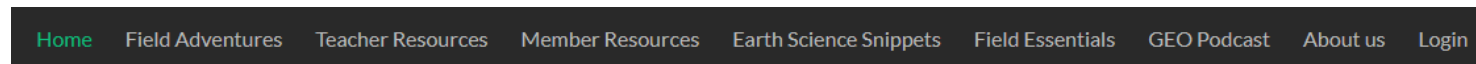
The chemical reactions that degrade the rock particles lock the greenhouse gas into carbonates within months, and some scientists say this approach may be the best near-term way of removing CO₂ from the atmosphere.

[Spreading-rock-dust-on-fields-could-remove-vast-amounts-of-co2-from-air?](#)

[Which-emits-more-carbon-dioxide-volcanoes-or-human-activities](#)

Geoscience Education and Outreach

I stumbled across this website and found bits and pieces of interesting information. Below are some of the tabs on the homepage.



The site is run by Garry Lewis, who also arranges field trips to various parts of the world to view various aspects of the Geosciences. Covid has obviously put 2020s trips on hold but I noticed a trip to Italy to look at the volcanoes – field trip???

The Volcanoes of Italy June 23 - July 2nd 2021

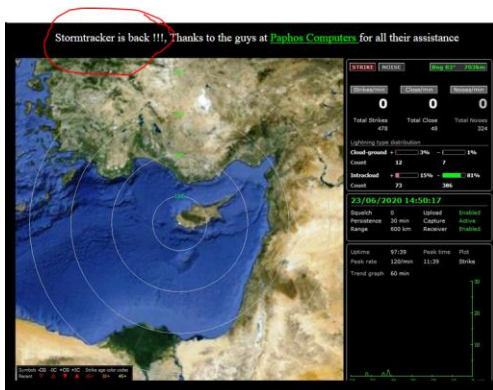
There is a section accessible from the home page on [Earth Science Snippets](#) with lots of very interesting information.

There is a tab [Geo Podcasts](#) with +20 podcasts. I have been listening to the ‘Volcano Shapes’ podcast whilst writing this eNews.

[Geoetc - Podcast - Volcano shapes - shield, composite/stratiform, caldera - and chemistry](#)

A great website to explore.

Cyprus Storms



Many of you attended the presentation by Ian McLean, who is the mastermind of the Cyprus Storms website – an absolute goldmine of information. By popular demand Ian has managed to get the original ‘Storm Tracker’ back online.



There is also a new hi-definition ‘Peiya Webcam’.

Tanzanian man becomes millionaire after discovering biggest tanzanite gems on record



A great story:

A small scale Tanzanian subsistence miner has hit the jackpot after discovering what are believed to be the two largest tanzanite gemstones ever found.

The Bank of Tanzania handed Saniniu Laizer a cheque for

7.74bn Tanzanian shillings (£2,670,139) after he found the two dark violet-blue gemstones, each about the size of an average forearm.

The stones were found in a tanzanite mine in the country's north, that is surrounded by a wall to control cross-border smuggling of the gemstones.

Tanzanite is found only in a small northern region of the East African nation.

The first gemstone weighed 9.27kg (20.43lb) while the second weighed 5.10kg (11.25lb), a government spokesperson said.



Tanzanite

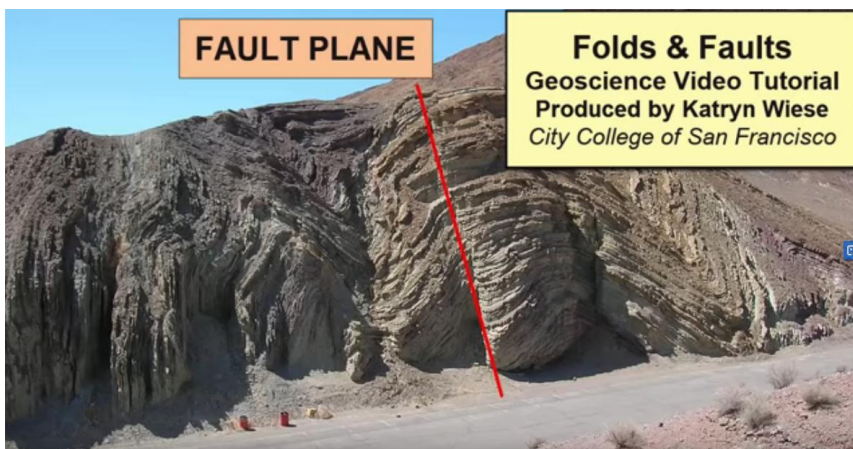
General

Category

Sorosilicate: zoisite variety

Tanzanite

Video Tutorial & Quiz (2 for the price of 1)



[Review of folds and faults found in Earth's crust](#): their causes, classification, and importance. Also reviews the various stresses that lead to the variety of deformation types. The video pauses to check on your understanding of the tutorial.

Acknowledgements

