

Surges in volcanic activity on the Moon about two billion years ago <https://doi.org/10.1038/s41467-023-39418-0>

- 1) Eruption – [ɪˈrʌpʃn] – an occasion when a volcano suddenly throws out burning rocks, smoke, etc.

Ex(dict) - a major volcanic eruption

Ex(my) - an eruption of violent protest

Ex(article) - young volcanic eruptions are poorly constrained by remote observations and limited samples.

- 2) Investigate – [ɪnˈvestɪgeɪt] – to carefully examine the facts of a situation, an event, a crime, etc. to find out the truth about it or how it happened.

Ex(dict) - The FBI has been called in to investigate.

Ex(article) - we investigate the mineralogy and geochemistry.

Ex(my) - the report calls for a commission to investigate the matter further.

- 3) Assimilation – [əˌsɪməˈleɪʃn] – the process of fully understanding an idea or some information so that you are able to use it yourself.

Ex(article) - limited magma recharge or shallow-level assimilation.

Ex(dict) - his assimilation into the community

Ex(my) - the rapid assimilation of new ideas

- 4) Trigger – [ˈtrɪɡə(r)] – to make something happen suddenly.

Ex(article) - more factors such as crustal recycling can trigger volcanic eruptions.

Ex(dict) - Nuts can trigger off a violent allergic reaction

Ex(my) - The incident triggered protests across the country.

- 5) Duration – [djuˈreɪʃn] – the length of time that something lasts or continues.

Ex(article) - such a duration of basaltic volcanism on the Moon is broadly consistent with models of thermal evolution

Ex(dict) - The school was used as a hospital for the duration of the war.

Ex(my) - a contract of three years' duration

- 6) Meteorite – [ˈmi:tiəraɪt] – a piece of rock from outer space that hits the earth's surface.

Ex(article) - later than previously measured in returned samples and meteorites, where heat-producing elemental and water concentrations were lower than expected.

Ex(my) - the first step in identifying a possible meteorite is the magnet test

7) Flux – [flʌks] – continuous movement and change.

Ex(article) - Knowledge of the eruptive fluxes in terms of volume/mass could place constraints on this late-stage lunar volcanic activity.

Ex(dict) - a flux of neutrons

Ex(my) - Our society is in a state of flux.

8) Bombardment – [bɒm'bɑ:dmənt] – an attack in which smt. are fired at a place or smt. are dropped on it continuously.

Ex(article) - difficulties in the recognition of flow fronts caused by impact bombardment and other continuous erosional processes.

Ex(dict) - The city came under heavy bombardment.

Ex(my) - these days of media bombardment

9) Predominant – [prɪ'dɒmɪnənt] – having more power or influence than others.

Ex(article) - plagioclase and clinopyroxene are the predominant phases in the rock clasts.

Ex(dict) - a predominant culture

Ex(my) - a way of thinking that is predominant in modern social life

A quantum engine in the BEC–BCS crossover <https://doi.org/10.1038/s41586-023-06469-8>

1) Regimes - /reɪ'ʒi:m/ - a method or system of organizing or managing something.

Ex(article) - Heat engines convert thermal energy into mechanical work both in the classical and quantum regimes.

Ex(dict) - Our tax regime is one of the most favourable in Europe

Ex(my) - There is a dense regime in this university.

2) Exploited - /ɪk'splɔɪt/ - to use something well in order to gain as much from it as possible.

Ex (article) - So far have not been exploited in cyclic engines.

Ex(dict) - He exploited his father's name to get himself a job.

Ex(my) - She realized that her youth and inexperience were being exploited

3) Resonance - /'rezənəns/ - the sound or other vibration produced in an object by sound or vibrations of a similar frequency from another object.

Ex(article) - We employ a harmonically trapped superfluid gas of Li atoms close to a magnetic Feshbach resonance

Ex(dict) - Her voice had a strange and thrilling resonance

Ex(my) - In this experiment setup we reached a resonance

4) Piston - /'pɪstən/ - a part of an engine that consists of a short cylinder that fits inside a tube and moves up and down or backwards and forwards to make other parts of the engine move.

Ex(article) - Work corresponds to energy change at constant entropy, as in the case of the variation of the position of a piston

Ex(my) - He changed piston in his car engine because of trouble with pressure in fuel system

5) Stroke - /strəʊk/ - an act of hitting.

Ex (article) - where heating and cooling strokes redistribute the quantum state populations

Ex (dict) - His punishment was six strokes of the cane.

Ex(my) - this stroke knocked him down

6) Exclusion - /ɪk'skluːʒn/ - the act of deciding that something is not possible.

Ex(article) - The exclusion principle plays an essential role for the stability of matter.

Ex(dict) - He was disappointed with his exclusion from the England squad.

Ex(my) - Exclusion of air creates a vacuum in the bottle.

7) Confined - /kən'faɪnd/ - small and surrounded by walls or sides

Ex(article) - atoms confined in a combined opto-magnetic trap

Ex(dict) - It is cruel to keep animals in confined spaces

Ex(my) - These chemicals should not be used in confined areas.

8) Emphasize - /'emfəsaɪz/ - to give special importance to something.

Ex(article) - We emphasize that all strokes can, in principle, be described by Hamiltonian dynamics

Ex(dict) - His speech emphasized the importance of attracting industry to the town.

Ex(my) - She emphasized the point in an interview at the weekend

9) Counterpart - /'kaʊntəpɑ:t/ - a person or thing that has the same position or function as somebody/something else in a different place or situation

Ex(article) - the fermionic counterpart populates all the energy levels up to the Fermi energy

Ex(dict) - The Foreign Minister held talks with his Chinese counterpart

Ex(my) – My counterpart get the solution of task which nobody was able to solve.

First detection of ozone in the mid-infrared at Mars: implications for methane detection  
[https://www.researchgate.net/deref/https%3A%2F%2Fdoi.org%2F10.1051%2F0004-6361%2F202038125?\\_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uliwicGFnZSI6InB1YmxpY2F0aW9uliwicG9zaXRpb24iOiJwYWdlQ29udGVudCJ9fQ](https://www.researchgate.net/deref/https%3A%2F%2Fdoi.org%2F10.1051%2F0004-6361%2F202038125?_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uliwicGFnZSI6InB1YmxpY2F0aW9uliwicG9zaXRpb24iOiJwYWdlQ29udGVudCJ9fQ)

- 1) Transition - /træn'zɪn/ - the process or a period of changing from one state or condition to another

Ex (dict) - the transition from school to full-time work

Ex(article) - during this fast transition phase between summer and winter ozone distribution

Ex(my) – this transition take one hour.

- 2) Abundance - /ə'bʌndəns/ - a large quantity that is more than enough

Ex (dict) - The brochure promised beautiful walks with an abundance of wildlife.

Ex(article) - The stability of the CO<sub>2</sub> atmosphere on Mars depends on the abundances of odd hydroge

Ex(my) – This winter the abundance of snow.

- 3) Occultation - /ɒkʌl'teɪʃn/ - an event that occurs when one object is hidden from the observer by another object

Ex(dict) - This occultation, that's the sign of some apocalyptic thing

Ex(article) - ACS MIR is a novel cross-dispersion spectrometer making solar occultation observations

Ex(my) – We was able to see Moon occultation a few month ago.

- 4) Wavenumber - /weɪv 'nʌmbə/ - Wavenumber is a term that is used in spectroscopy to describe a frequency

Ex(article) - An initial guess of wavenumber positions for the solar reference spectrum is compared to the solar spectrum measured

Ex (my) – This wave has a wavenumber a 1.

- 5) Absorption - /əb'zɔ:pʃn/ - the process of a liquid, gas or other substance being taken in

Ex (dict) - Vitamin D is necessary to aid the absorption of calcium from food.

Ex(article) - Volume absorption coefficients are computed using the HITRAN 2016 line list

Ex(my) – The process of absorption the light was studied in this article

- 6) Conjunction - /kən'dʒʌŋkʃn/ - a word that joins words, phrases or sentences, for example 'and', 'but', 'or' or 'because'

Ex(dict) - The theory is that there was a rare conjunction of certain bright planets that created the image of the so-called 'Star of Bethlehem'.

Ex(article) – This dramatic rise in ozone occurs in conjunction with the buildup of the winter polar vortex and the quick decline in water vapour

Ex(my) – Conjunction of this black holes was predicted the last century.

- 7) Distribution - /ˌdɪstrɪ'bjuːʃn/ - the way that something is spread or exists over a particular area or among a particular group of people

Ex(dict) - They studied the geographical distribution of the disease.

Ex(my) - a more equitable distribution of wealth

Ex(article) - during this fast transition phase between summer and winter ozone distribution the O<sub>3</sub> volume mixing ratio observed is 100–200 ppbv near 20 km.