

## ☰ Topic Page: [Weathering](#)

Definition: **weathering** from *Dictionary of Energy*

*Earth Science.* the natural processes by which the actions of atmospheric and other environmental agents, such as wind, rain, and temperature changes, result in the physical disintegration and chemical decomposition of rocks and earth materials in place, with little or no transport of the loosened or altered material.



Image from:

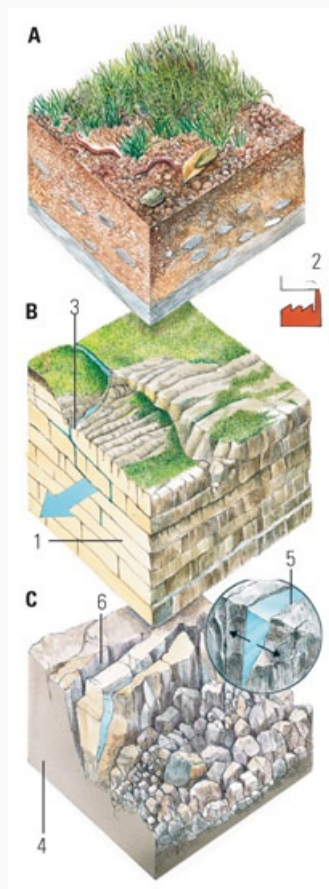
[Weathering is the breakdown of rock in situ. It... in Philip's Encyclopedia](#)

### Summary Article: **weathering**

From *Philip's Encyclopedia*

Breakdown and chemical disintegration of rocks and minerals at the Earth's surface by physical and chemical processes. In **physical weathering** in cold, wet climates, water seeping into cracks in the rock expands on freezing, so causing the rock to crack further and to crumble. Extreme temperature changes in drier regions, such as deserts, also cause rocks to fragment. **Chemical weathering** can lead to a weakening of the rock structure by altering the minerals of a rock and changing their size, volume, and ability to hold shape. Unlike erosion, weathering does not involve transportation.

## weathering



*Weathering is the breakdown of rock in situ. It occurs in two main ways: physical (A and C) and chemical (B) - usually in combination. At the surface, plant roots and animals such as worms break down rock turning it into soil (A). In chemical weathering (B), soluble rocks such as limestone (1) are dissolved by ground water, which is a*

very mild solution of carbonic acid. Acid rain caused by sulphate pollution (2) also attacks the rock. The water can create cave systems deep below the surface. Both heat and cold can cause physical weathering (C). When temperatures drop below freezing, freeze-thaw weathering can split even the hardest rocks such as granite (4). Water that settles in cracks and joints during the day expands as it freezes at night (5). The expansion cleaves the rock along the naturally occurring joints (6). In deserts, rock expands and contracts due to the extremes of cooling and heating, resulting in layers of rock splitting off.

**APA**

Chicago

Harvard

MLA

---

Weathering. (2008). In *Philip's encyclopedia*. London, UK: Philip's. Retrieved from <https://search.credoreference.com/content/topic/weathering>

---

**PHILIP'S** Copyright © 2007 Philip's

**PHILIP'S** Copyright © 2007 Philip's

## APA

Weathering. (2008). In *Philip's encyclopedia*. London, UK: Philip's. Retrieved from <https://search.credoreference.com/content/topic/weathering>

## Chicago

"weathering." In *Philip's Encyclopedia*. Philip's, 2008.  
<https://search.credoreference.com/content/topic/weathering>

## Harvard

Weathering. (2008). In *Philip's encyclopedia*. [Online]. London: Philip's. Available from:  
<https://search.credoreference.com/content/topic/weathering> [Accessed 12 November 2019].

## MLA

"weathering." *Philip's Encyclopedia*, Philip's, 1st edition, 2008. *Credo Reference*,  
<https://search.credoreference.com/content/topic/weathering>. Accessed 12 Nov. 2019.