

**COMBINATION NOTES**  
Record in your notes three factors that affect the rate at which rock weathers.

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## Weathering occurs at different rates.

Most weathering occurs over long periods of time—hundreds, thousands, or even millions of years. It can take hundreds or thousands of years for a very hard rock to wear down only a few millimeters—a few times the thickness of your fingernail. But the rate of weathering is not the same for all rocks. Factors such as surface area, rock composition, and location influence the rate of weathering.

**Surface Area** The more of a rock's surface that is exposed to air and water, the faster the rock will break down. A greater surface area allows chemical weathering to affect more of a rock.



Over time, mechanical weathering breaks a rock into smaller pieces.



As a result, more of the rock's surface is exposed to chemical weathering.

**Rock Composition** Different kinds of rock break down at different rates. Granite, for example, breaks down much more slowly than limestone. Both of these rocks are often used for tombstones and statues.

**Climate** Water is needed for chemical weathering to occur, and heat speeds up chemical weathering. As a result, chemical weathering occurs faster in hot, wet regions than it does in cold, dry regions. However, mechanical weathering caused by freezing and thawing occurs more in cold regions than in hot regions.