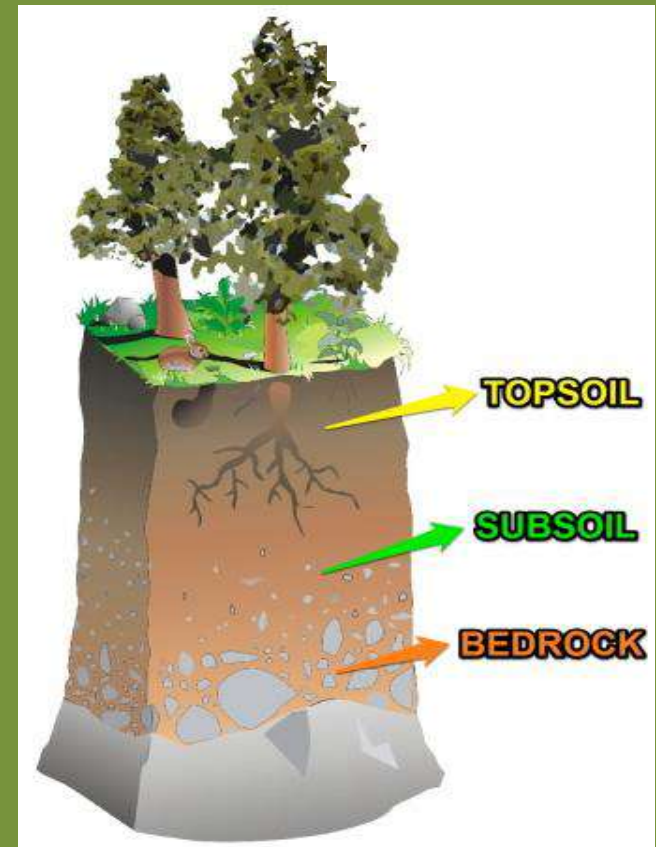


Weathering and Soil Formation (Chapter 6)



The breaking down of
rock and other
substances at Earth's
surface is _____.

weathering



Which type of weathering
causes the mineral
composition of rocks to
change?

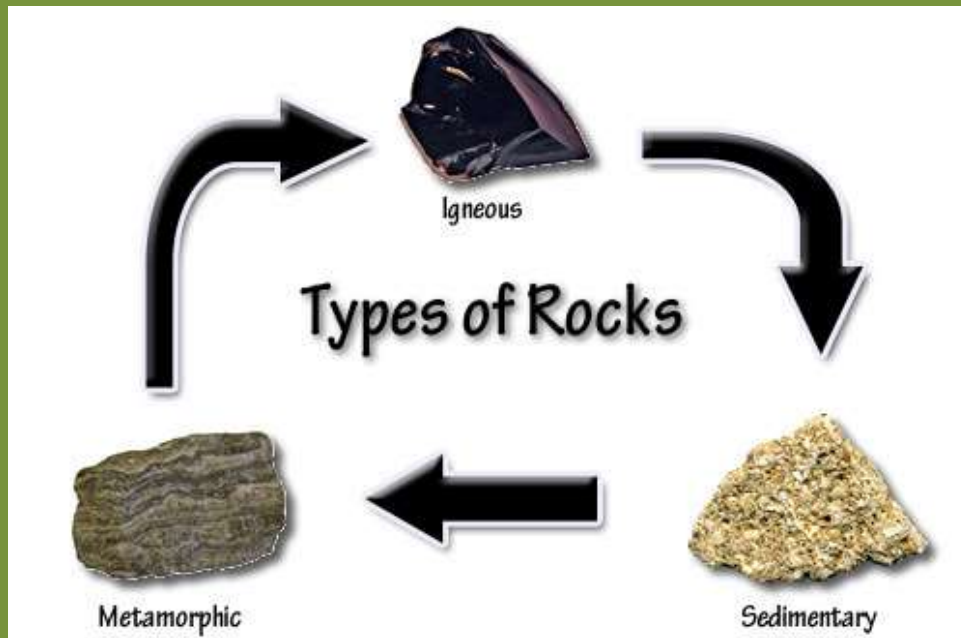


Chemical Weathering



What are the most important factors in determining the rate of weathering?

Type of rock & Climate



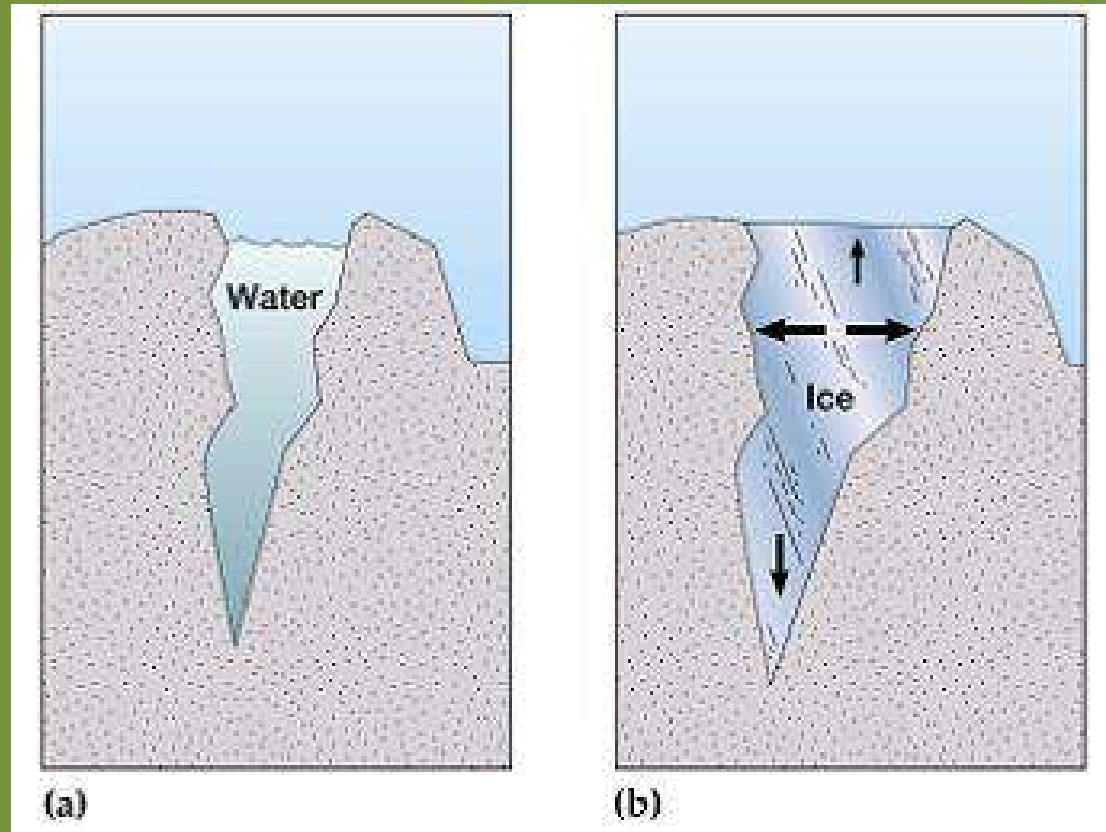
What can geologists
infer from the rounded,
eroded shapes of the
Appalachian
Mountains?

The mountains have been eroding for millions of years.



How does ice wedging cause
mechanical weathering of
rock?

Freezing & thawing of water



Does weathering occur
rapidly or slowly in a hot
and wet climate?

Rapidly

Which agent of mechanical weathering occurs when rock is worn away by the grinding action of other rock particles?

Abrasion

Wearing down rocks by friction of water or wind



WATER



WIND

A rock containing Iron becomes soft and crumbly and reddish-brown in color. Which cause of chemical weathering has taken place?

Oxygen



Why does permeable rock weather easily?

Permeable rock contains many small, connected airspaces which allows water to pass through easily.



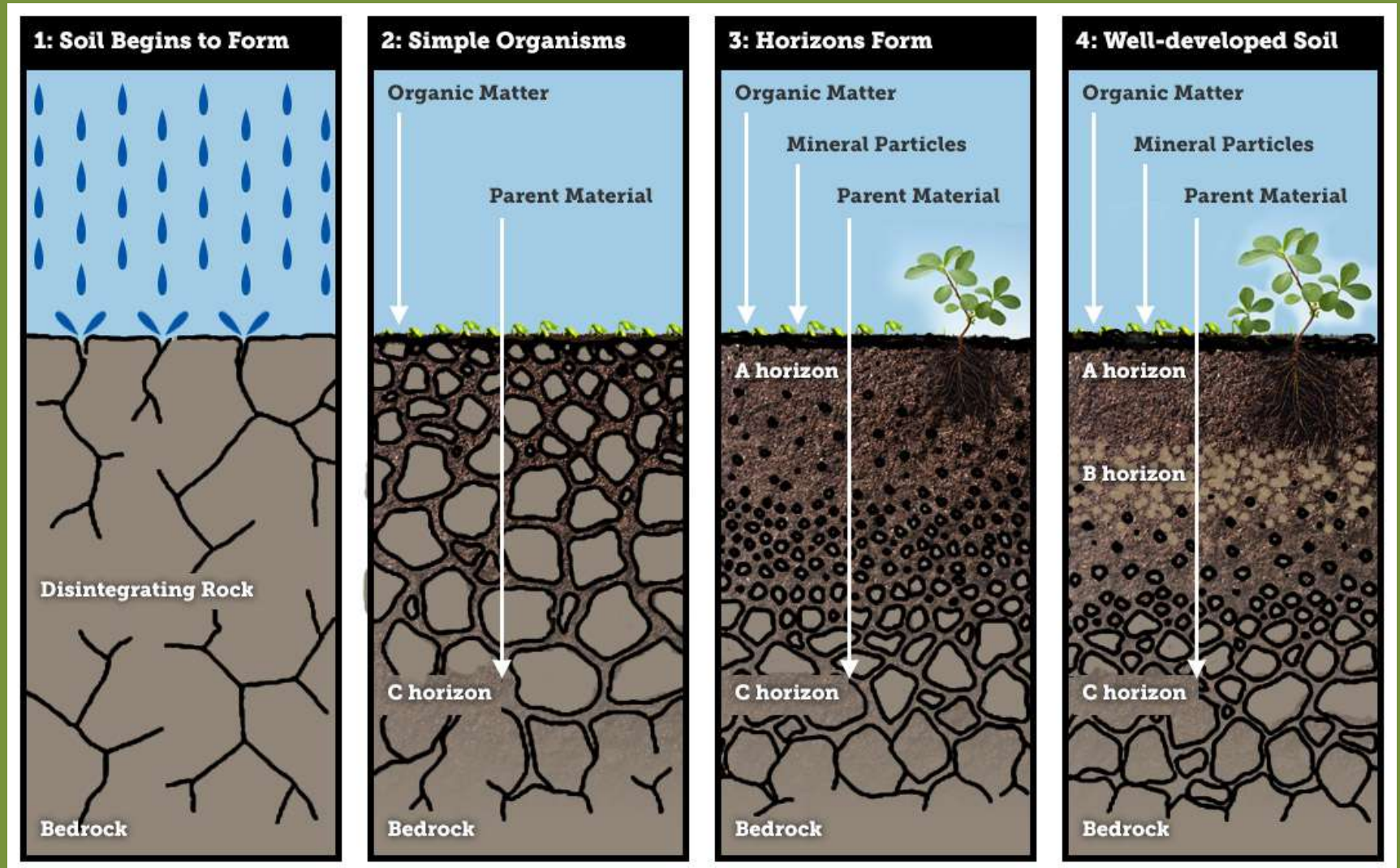
Why are areas of limestone easily weathered and eroded by groundwater?

Water combines with *carbon dioxide* as it sinks into the ground, creating *carbonic acid*, which slowly dissolves the limestone.



What begins the process of soil formation?

Weathering of bedrock



Soil that is rich in humus has
high_____.

Fertility

Soil formation would take place most rapidly with the weathering of _____.

- A. granite on a dry mountain top
- B. limestone in a desert
- C. granite in a cold, dry climate
- D. limestone in a warm, wet climate

D. limestone in a warm, wet
climate

Why is soil a valuable
natural resource?

Soil is important to all living things on land.

What are the two “jobs” of
living organisms
(decomposers) in soil?

mix the soil & make humus



Earthworms add their wastes to the soil, then they die and decay in the soil. They are contributing to the formation of _____.

Humus

Which of the following would be found
in the “B” horizon?

- A. Very little clay, minerals, and humus
- B. humus only
- C. partially weathered rock
- D. topsoil

A. Very little clay, minerals, and humus

Plant growth and animal activity result in which type of weathering?

Mechanical weathering

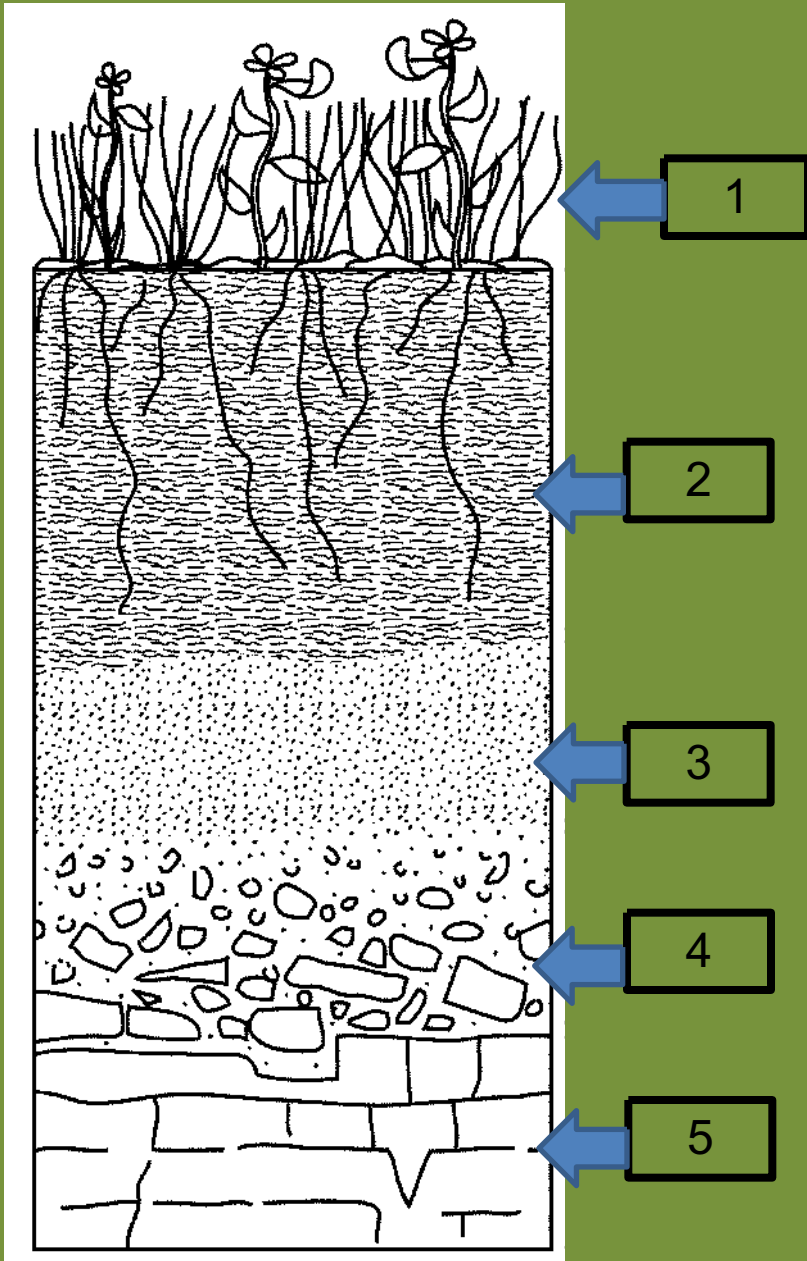


A marble statue is left exposed to the weather. Within a few years, the details on the statue have begun to weather away.

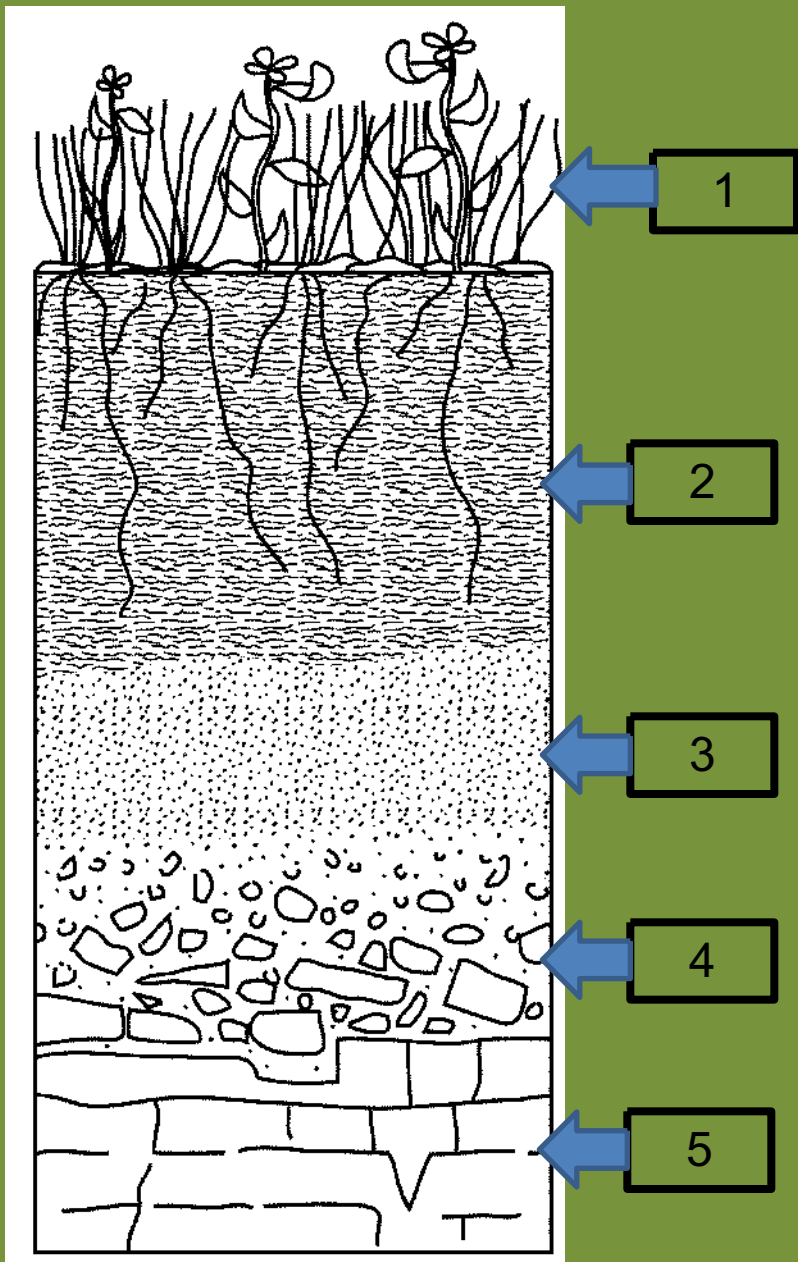
What is the cause?

Acid Rain





- A. Subsoil
- B. Topsoil
- C. Decomposers
- D. O horizon
- E. C horizon
- F. A horizon
- G. B horizon
- H. Litter
- I. Solid layer of rock
- J. Very little clay & humus
- K. Most humus, very fertile
- L. Bedrock
- M. Partly weathered rock
- N. Parent material



- A. Subsoil--3
- B. Topsoil--2
- C. Decomposers--2
- D. O horizon--1
- E. C horizon--4
- F. A horizon--2
- G. B horizon--3
- H. Litter--1
- I. Solid layer of rock--5
- J. Very little clay & humus--3
- K. Most humus, very fertile--1
- L. Bedrock--5
- M. Partly weathered rock--4
- N. Parent material--5