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GEOLOGY

Chapter 3: Action of different elements on rocks

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Chapter 3: (3 weeks)
Action of different elements on rocks

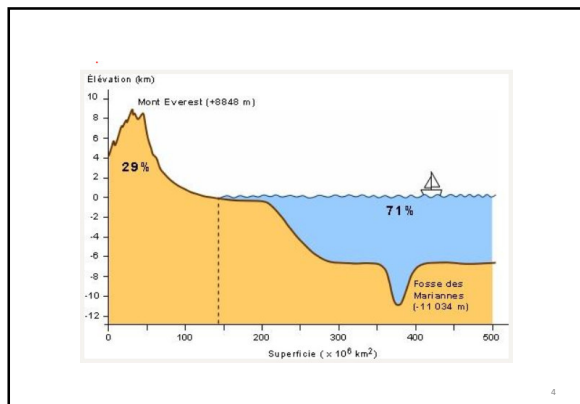
3.1 Action of air on rocks
3.2 Action of water on rocks
3.3 Action of glaciers on rocks

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EXTERNAL GEODYNAMICS

*Water, ice and wind,
sculpt continental surfaces.*

3




Wind erosion

It is the action of destruction of rocks and reliefs by the wind.

Wind action is especially noticeable in regions where soils and rocks are not protected by plant cover (i.e. in hot arid regions and in very cold regions).

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Deflation



The wind lifts the fine elements and carries them over very long distances. The coarse elements are moved at ground level and make successive jumps (**saltation**) and roll, the very fine elements fly away.

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Deflation (consequences)



The surface layer of the soil becomes thinner, the underlying rocks can again be attacked by mechanical disintegration. Temporarily the surface of the relief is dotted with large blocks of rock without any fine element environment (this is the case of the **reg** in the Sahara)

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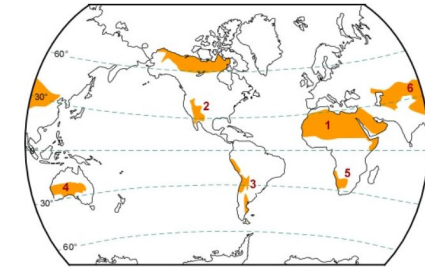
Corrasion



It is the attack of rocks by coarse and very hard elements carried by the wind. The surface of the rocks is then shiny and has a greasy appearance, but matt under the microscope.

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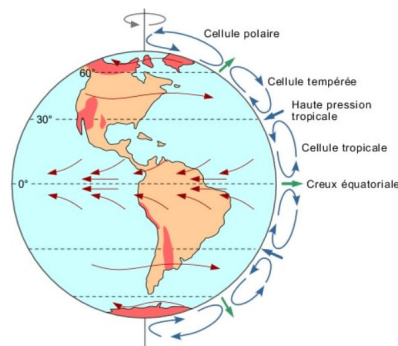
The Great Deserts of the World



- | | |
|-------------------------|--|
| 1 désert du Sahara | 4 déserts de Gibson, Victoria et Simpson |
| 2 désert de l'Arizona | 5 désert de Kalahari |
| 3 désert de Grand Chaco | 6 déserts de Kobi et de Kryssyl Koum |

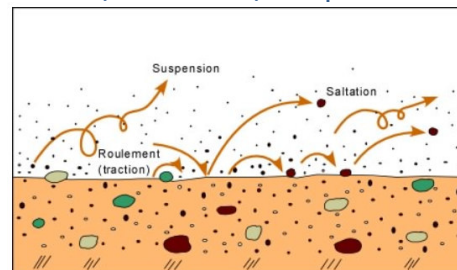
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In deserts, the main agent of erosion and transport of materials is wind..



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Traction / Saltation / Suspension



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The erosive action of water

Water, the main agent of erosion,

Mechanical action:

Disintegration of the softest materials by flowing

Shocked stones break and wear away.

The waves fragment the rocks of the coastline.

Frost causes rocks to split

Glaciers wear away rock and move the materials they have broken (moraines).

Chemical action:

Rainwater becomes concentrated in carbon dioxide as it passes through the atmosphere. It is then able to dissolve certain minerals contained in rocks.

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