

## WEATHERING: PHYSICAL, CHEMICAL & BIOLOGICAL: PICTURE SUMMARY 2020

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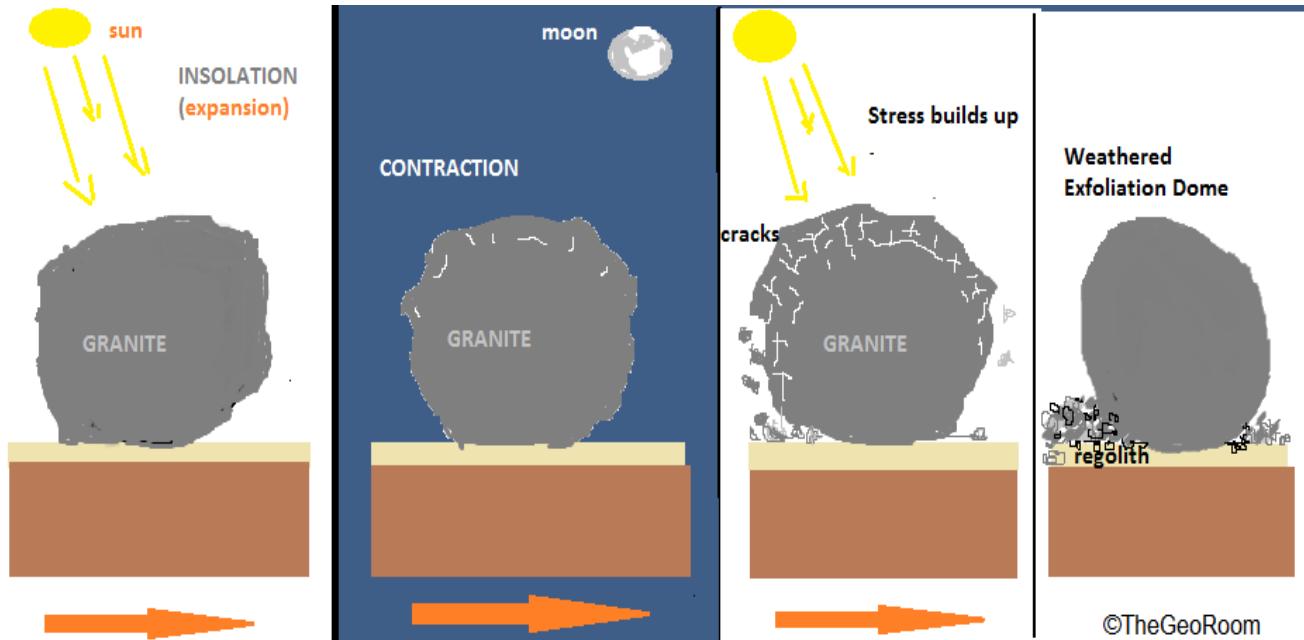


### PHYSICAL WEATHERING

Block and Granular Disintegration



**Block Disintegration: Freeze and thaw**

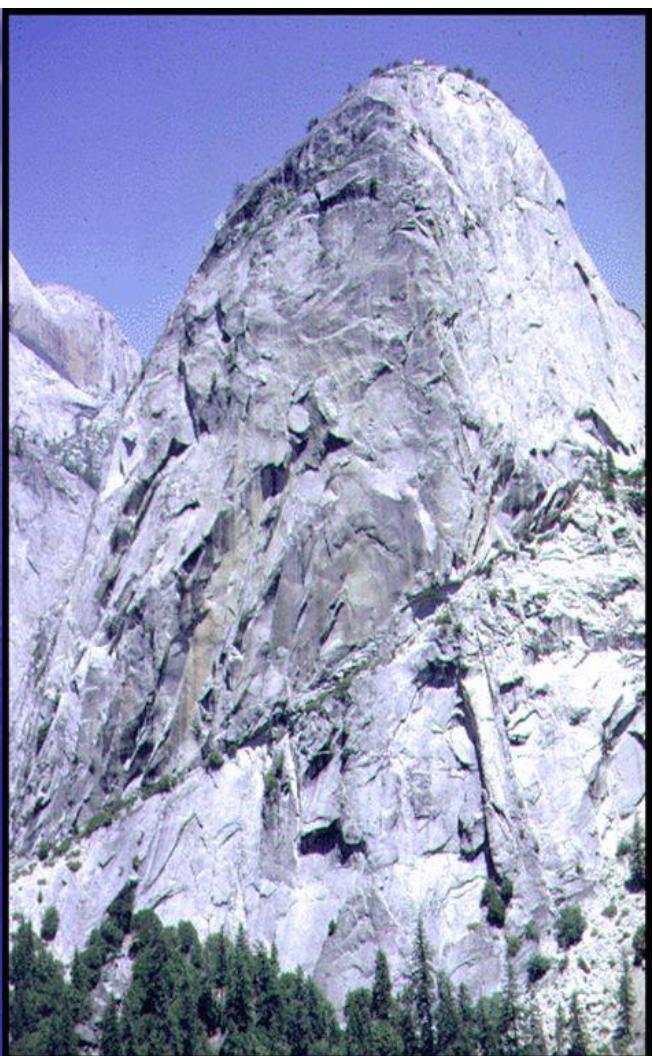


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## Exfoliation Domes

As erosion removes rock material from the surface of the land, the underlying rocks are under less pressure. As the pressure is lowered on them, the rocks expand upwards, creating fractures. Slabs of rock then 'peel off' along the fractures, creating domical hills. Famous 'Half Dome Mountain' is an example of an 'exfoliation dome.'

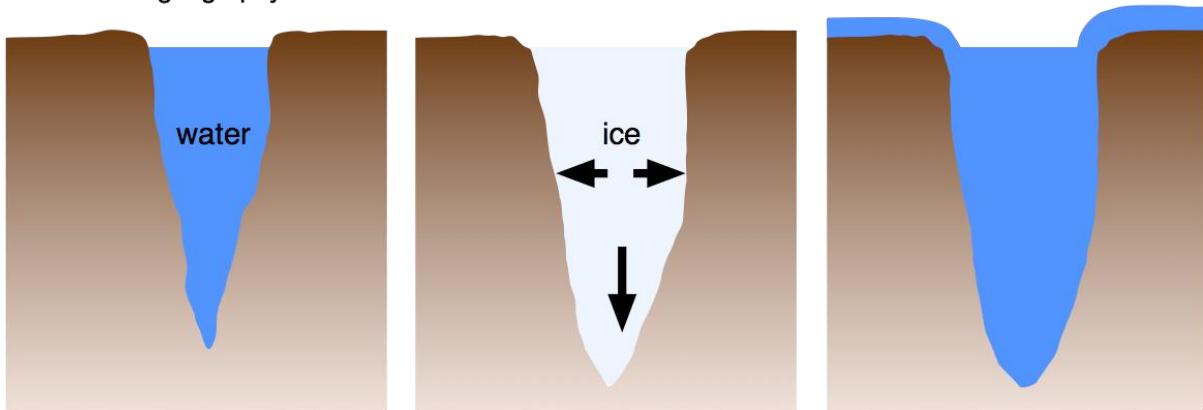
[http://academic.brooklyn.cuny.edu/geology/leveson/core/topics/weathering/picture\\_gallery/display/yosemite\\_12.html](http://academic.brooklyn.cuny.edu/geology/leveson/core/topics/weathering/picture_gallery/display/yosemite_12.html)



# How does freeze-thaw weathering take place?

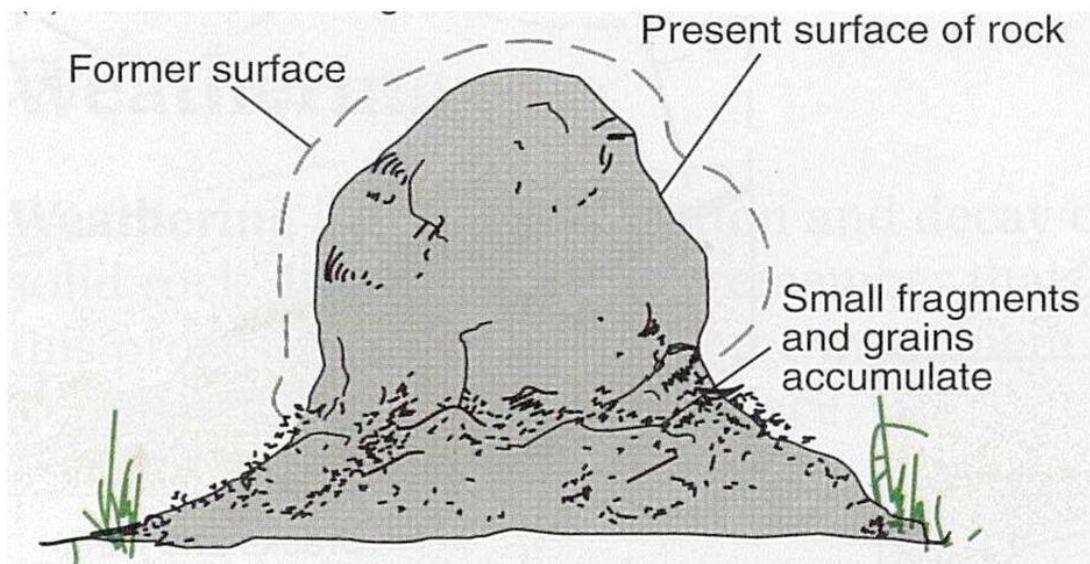
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Water enters cracks in the rock. Temperatures fall at night, causing water to freeze. When water turns to ice it expands by ten percent. This puts pressure on the rock, prising the crack apart. The ice melts, water seeps deeper into the crack and freezes again. Over a period of time large blocks of rock can be shattered by repeated freeze-thaw weathering.

## Granular disintegration





**Granular Disintegration**



**Weathering by Exfoliation**



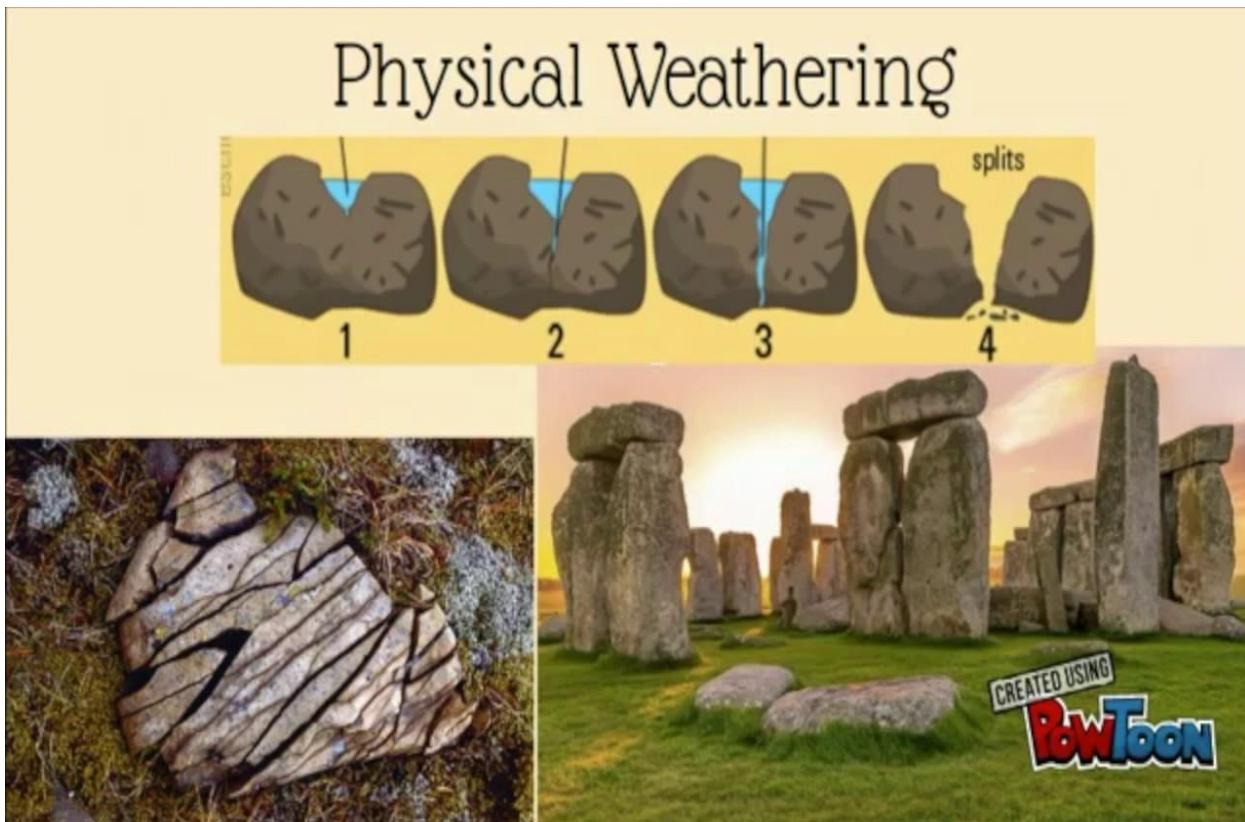
**An Exfoliation Dome**



**Onion Peeling**

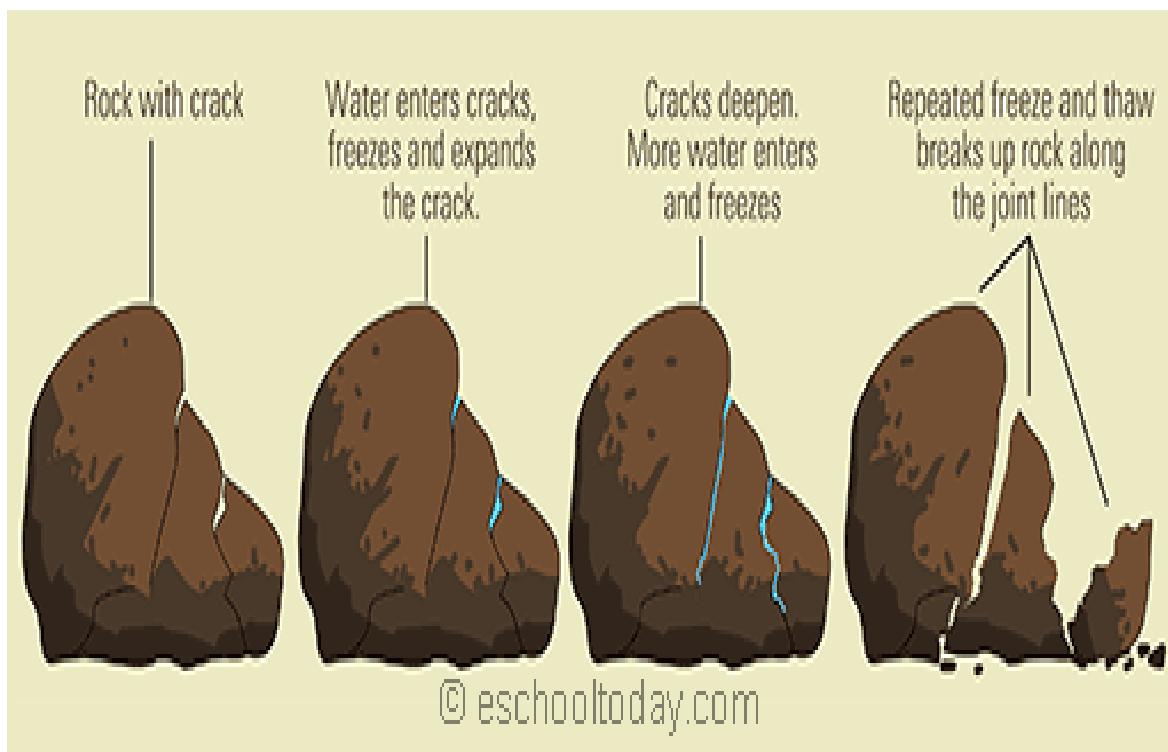


**Onion Peeling**

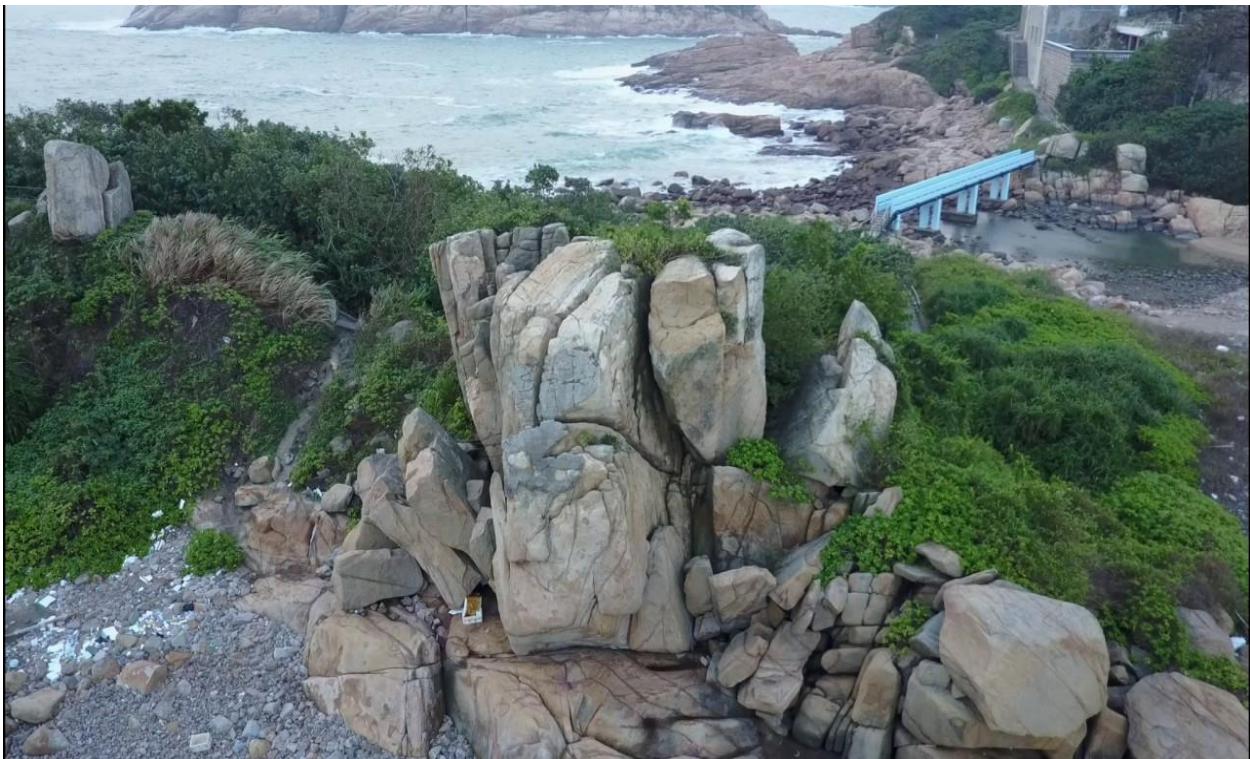




### Block Distrnitergration



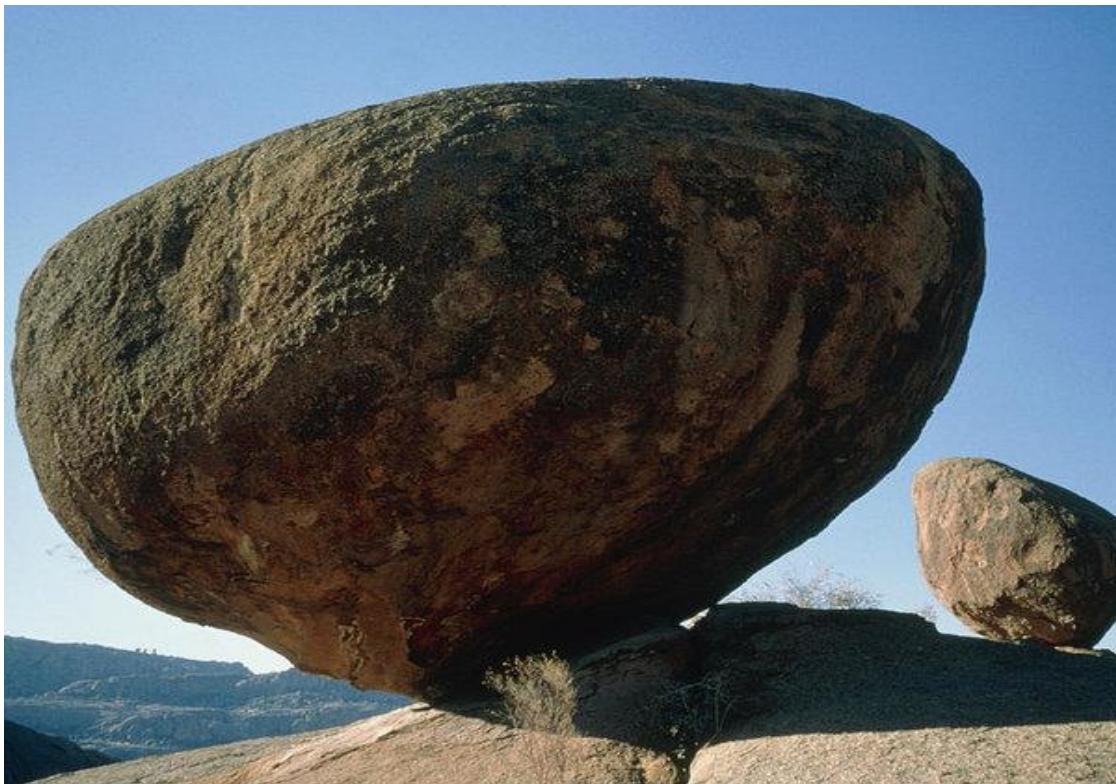
### Frost Action



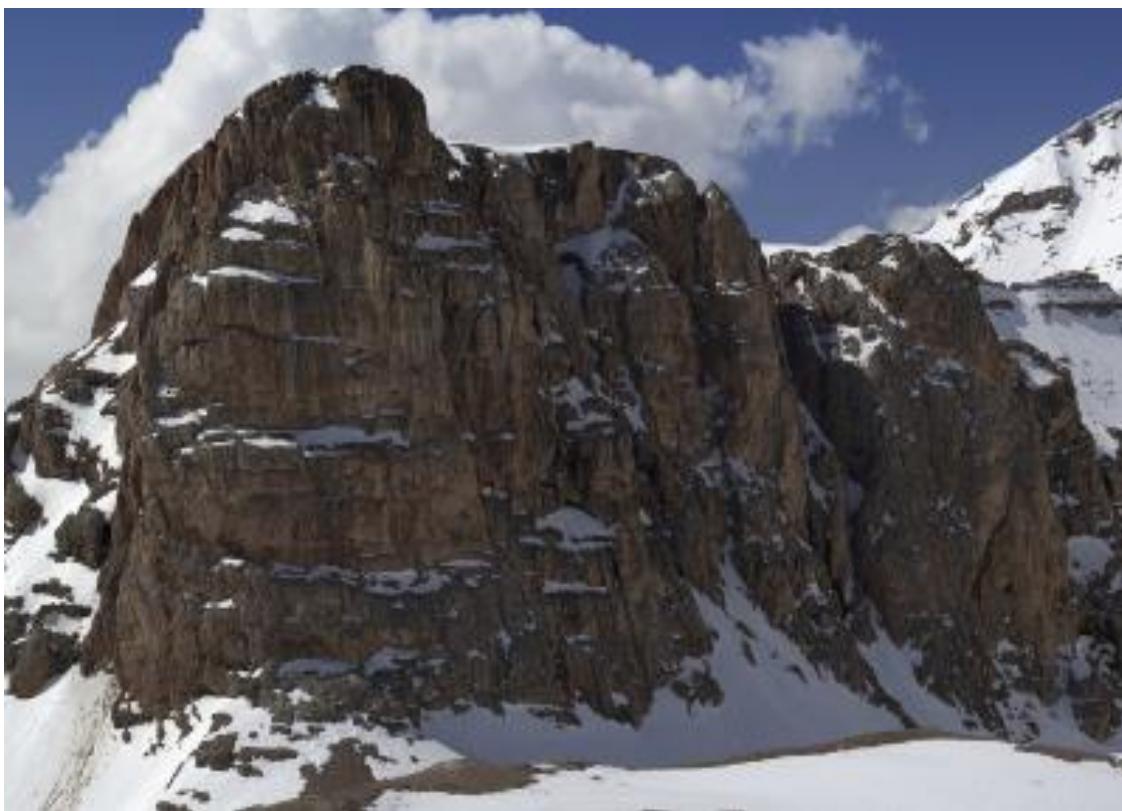
**Block Disintegration**



**Grannular Disintegration**



**Exfoliation dome**



**Weathering by frost action**



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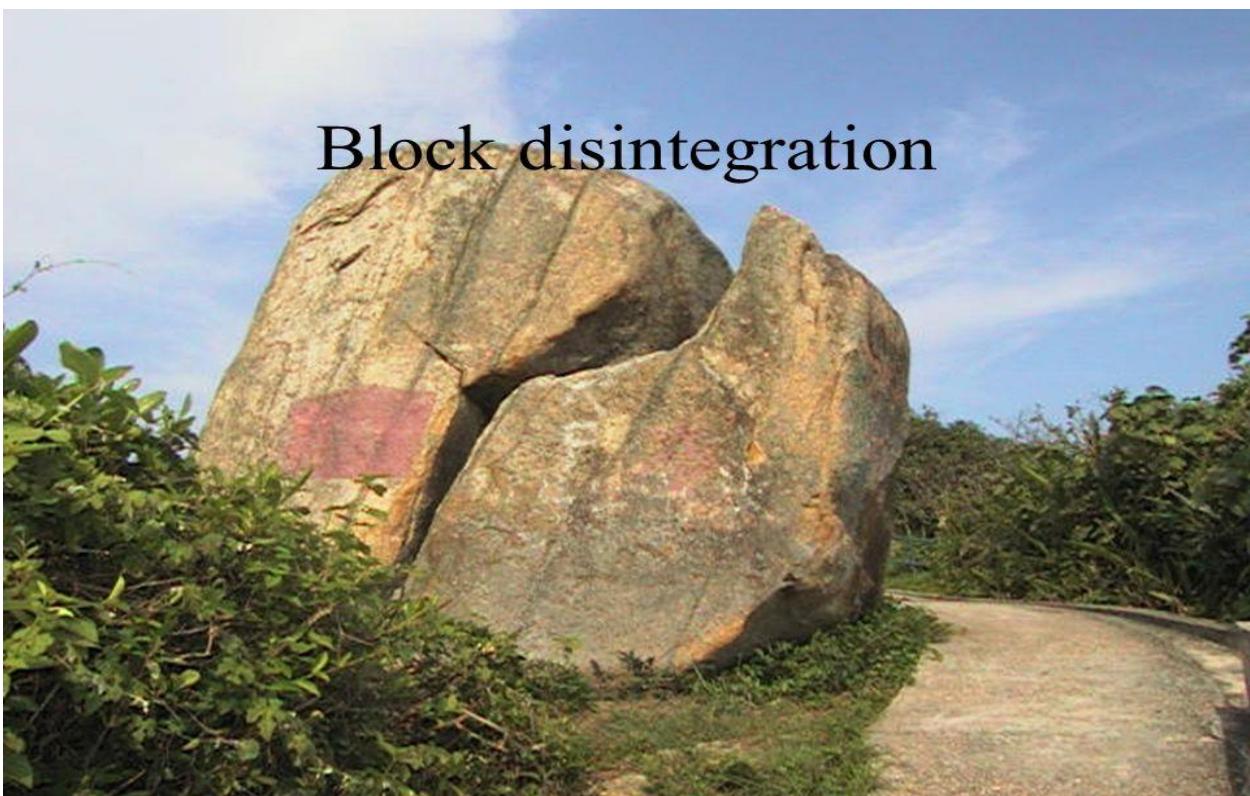
**Physical weathering by Wind erosion**



**Granular disintegration**



**Physical weathering by wind action**



**Block disintegration**

## LESSON SUMMARY

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BLOCK DISINTERGRATION

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**Physical weathering by frost action**



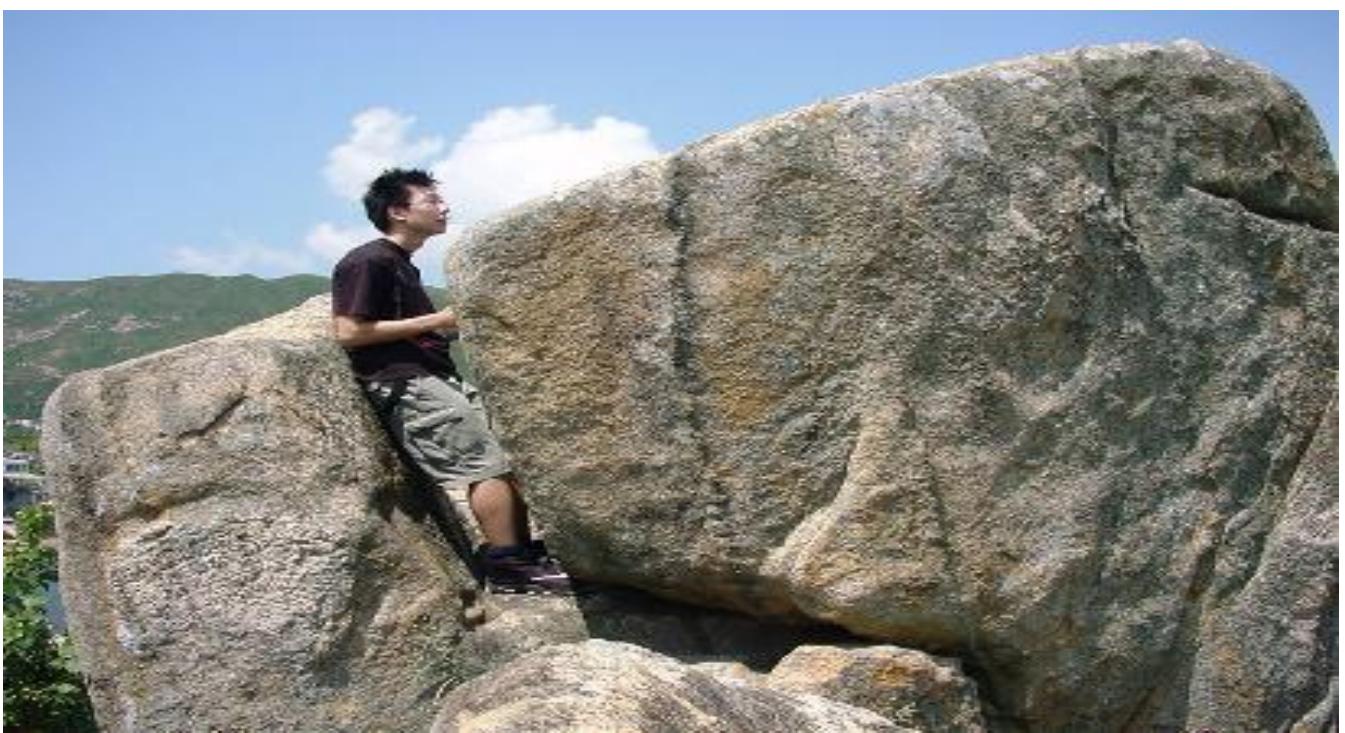
**Block disintegration**



**Grannular disintegration**



**Physical weathering by Wind Action**



**Block Disintergration**



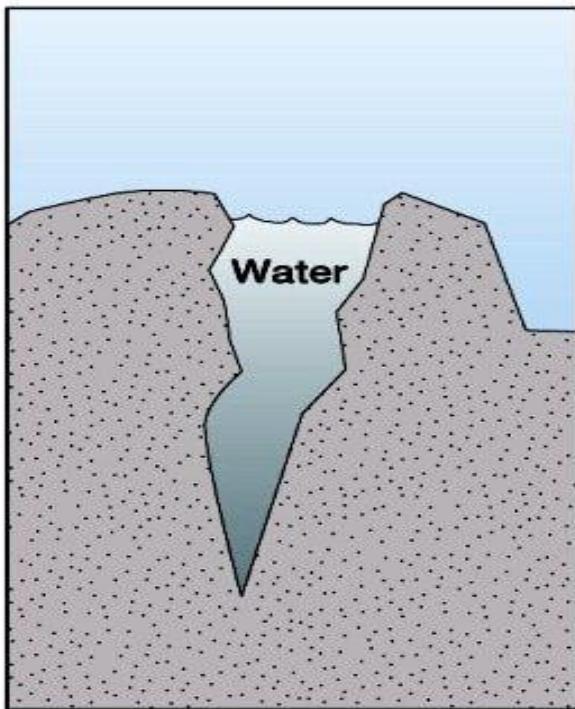
**Block Disintergration**



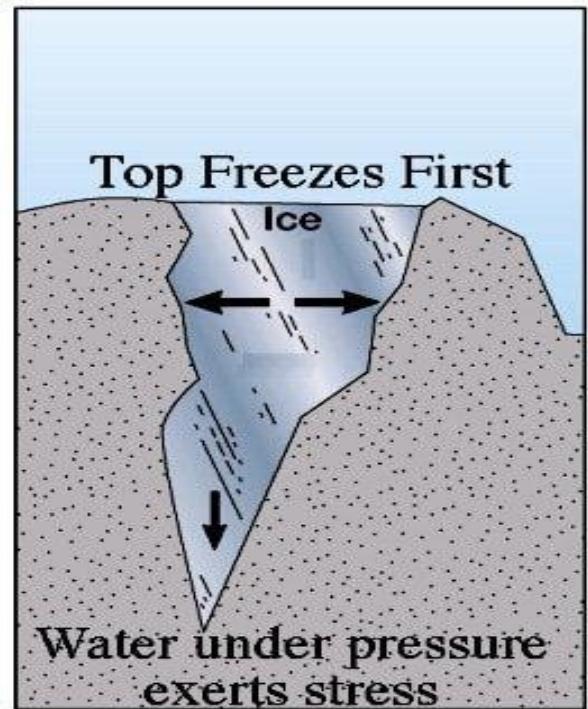
**Grannular Disintergration: Commonly on walls of buildings**



**Granular Disintegration: Common on buildings**



**(a)**

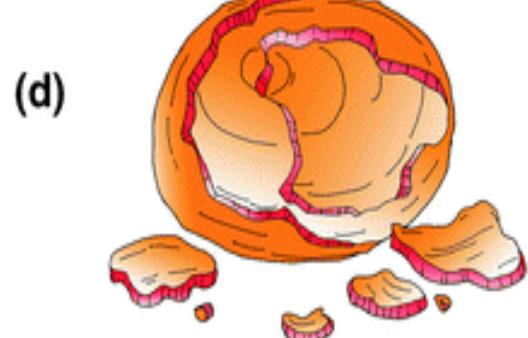
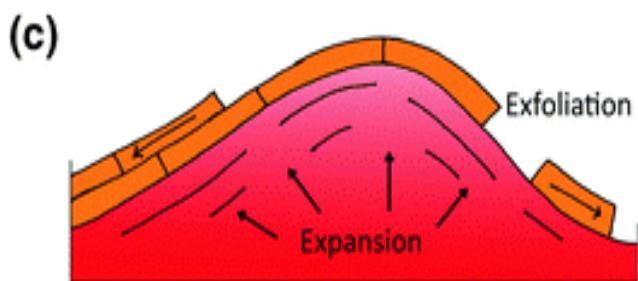
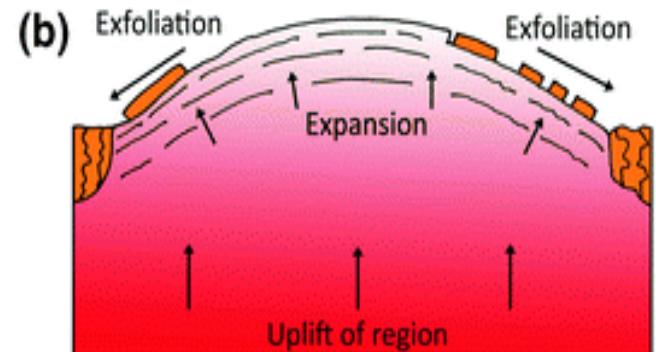
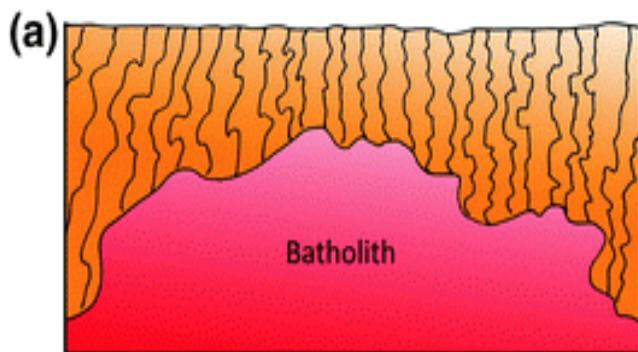


**(b)**

**Physical Weathering by frost action**



### Physical weathering by Wind Action





**Onion Peeling**



**Block Disintergration**



# WIND EROSION

WIND EROSION IS WHEN WIND MOVES STUFF AROUND THAT IS NATRUL.

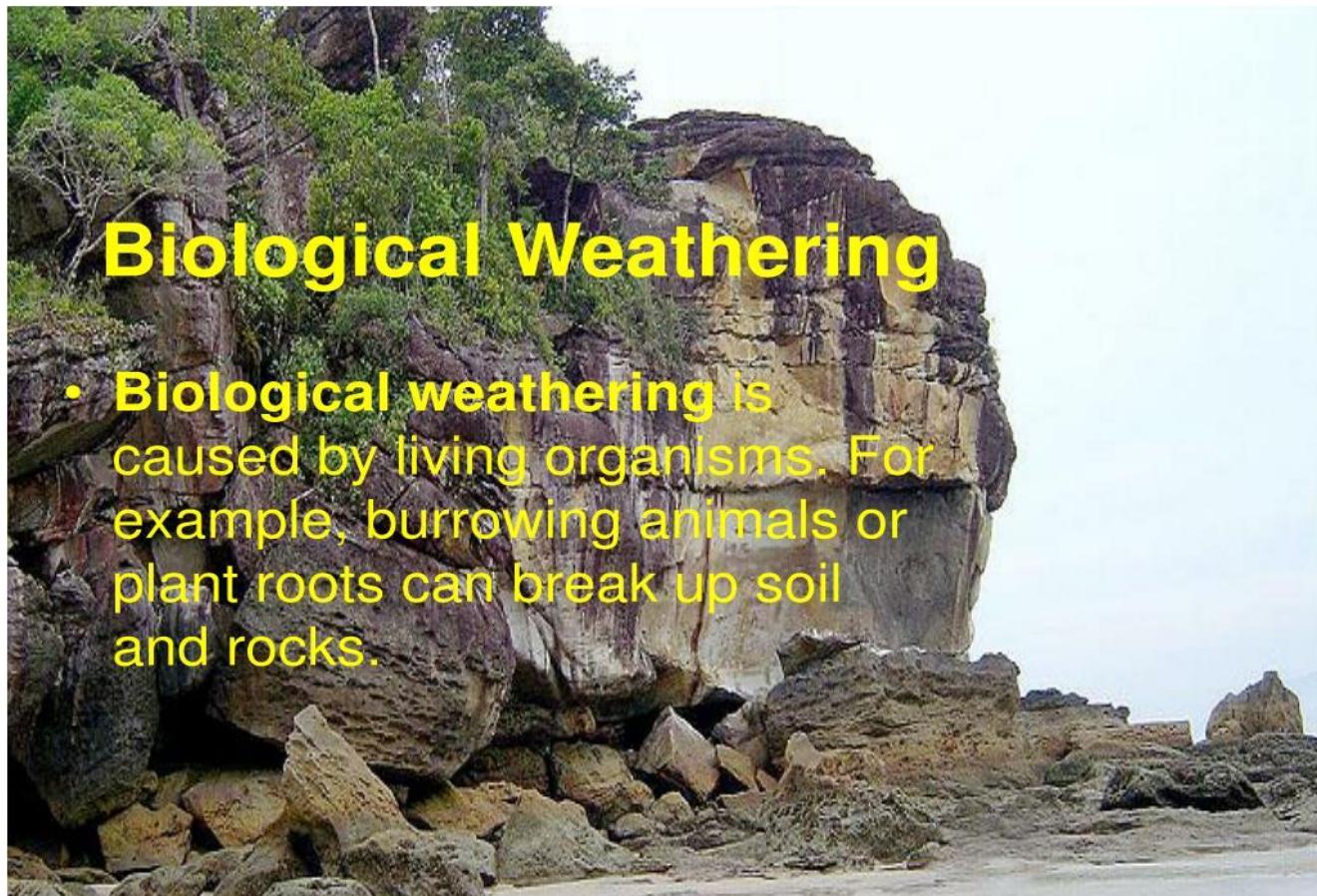
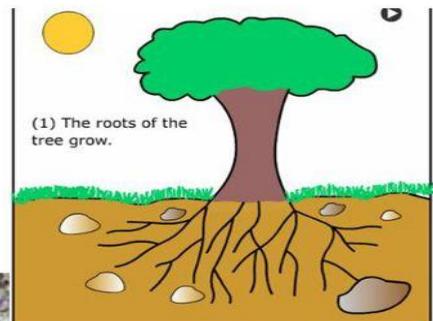


**Physical Weathering by wind action**

# Biological weathering

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Look at the diagrams. Discuss your ideas about how biological weathering occurs with your partner and be prepared to share your ideas when asked. You have 2 minutes

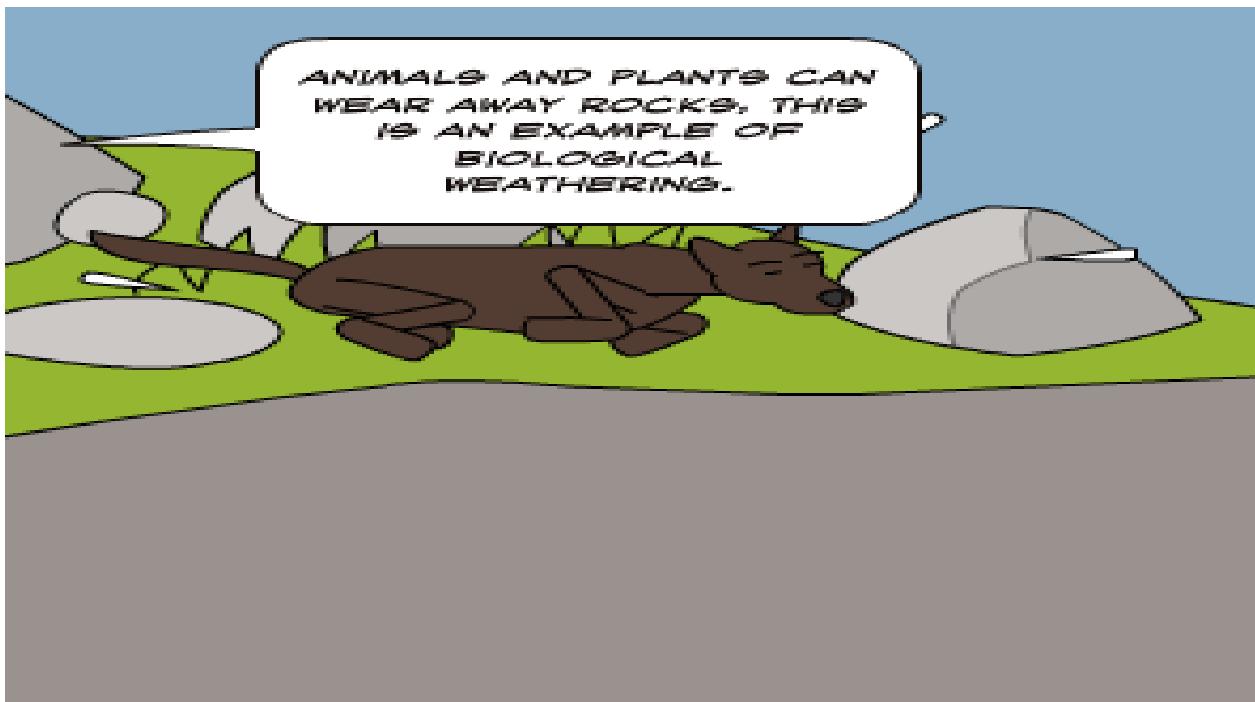




**Physical Biological weathering of plant roots**

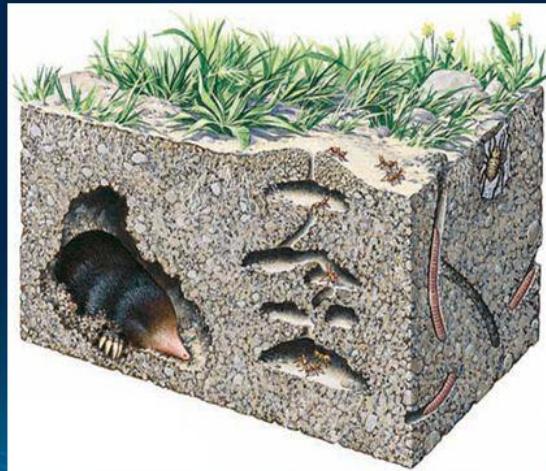


**The Pancake rocks in Newzland**



## Animals and Mechanical Weathering (Biological Weathering)

Animals that burrow in the ground break up soil and loosen rocks to be exposed to further weathering (Biological Weathering)





**Mole Cricket digs tunnels: Physical Biological weathering**





**Termites break down rocks**





**Rodents: Break up rocks when digging tunnels**



**Burrowing animals like rats**

## By Plant



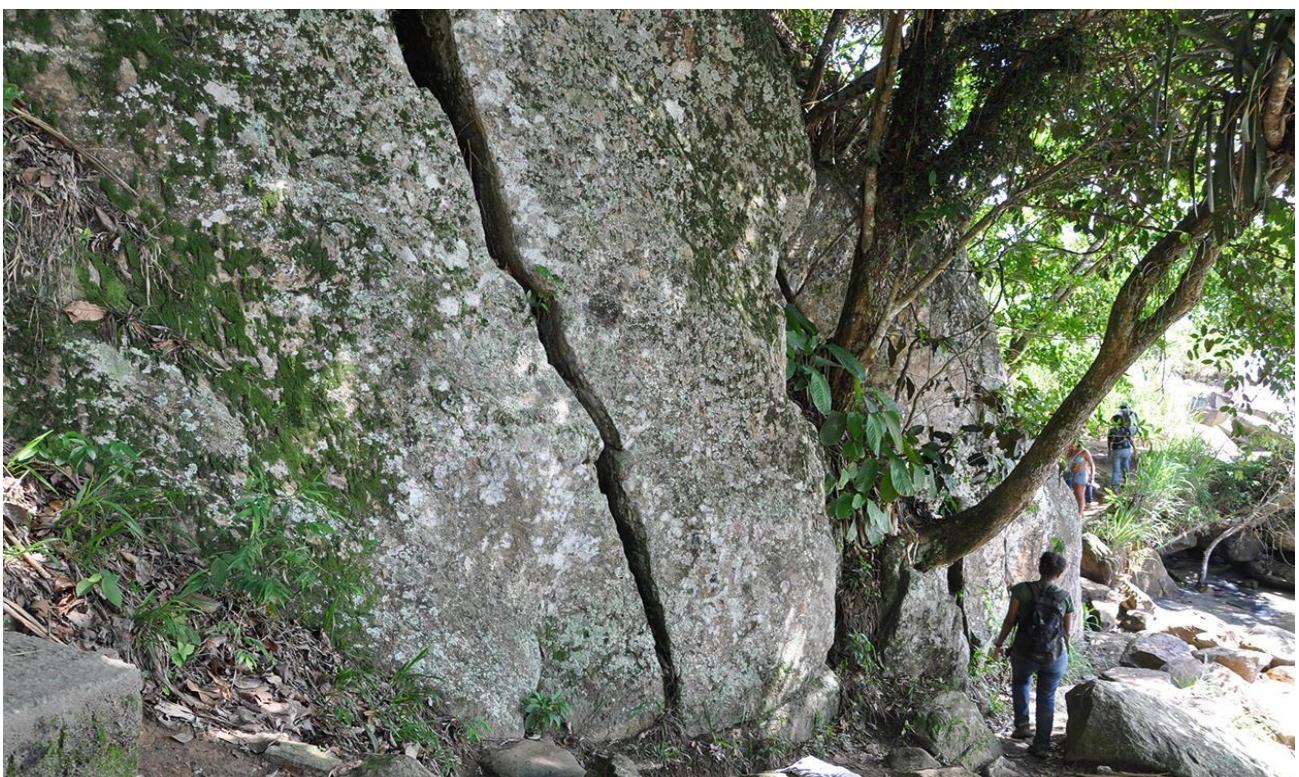
The roots of the plant are growing into the crack of rocks and end up breaking rocks apart.



Action of Plant roots: BIOLOGICAL PHYSICAL; WX:



**Biological Physical weathering by action of plant roots that break rocks**

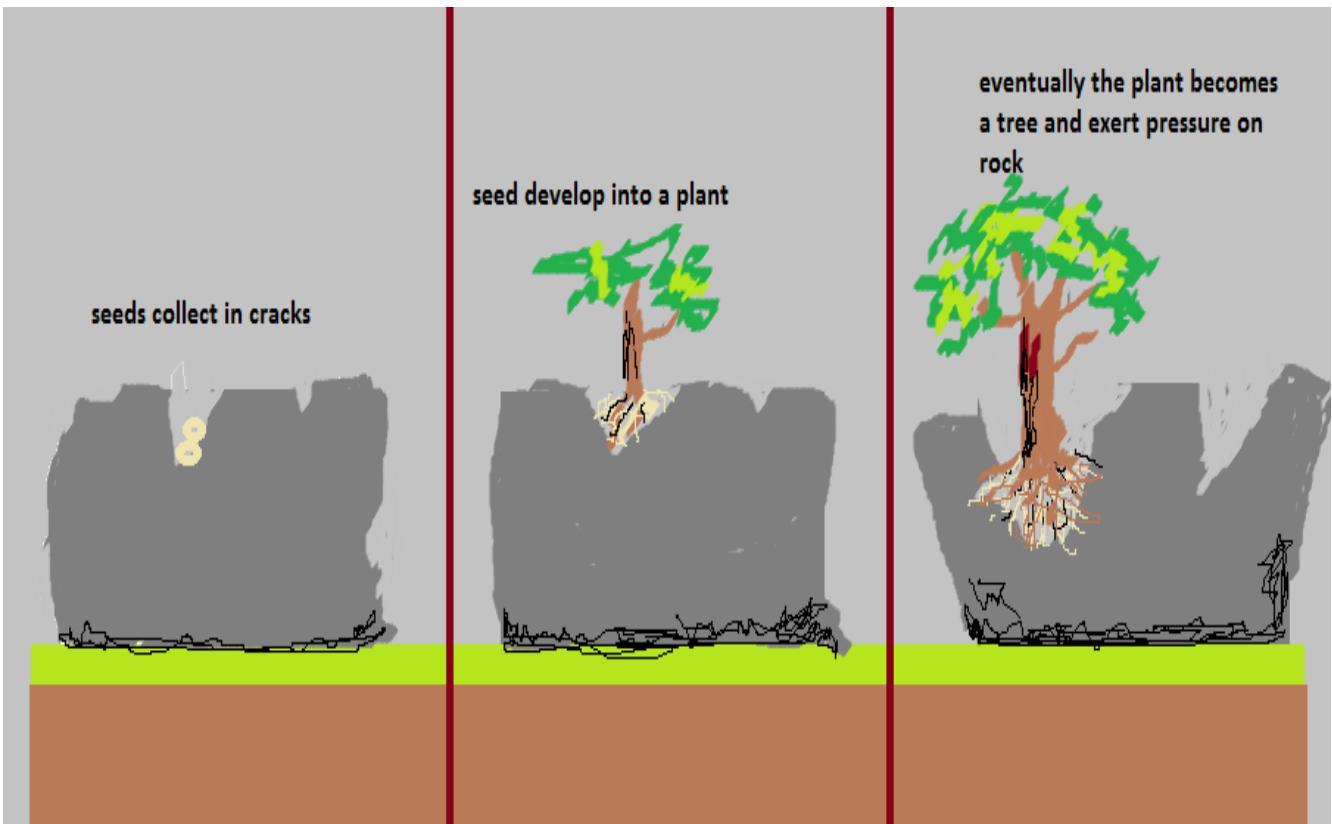


**Action of plant rocks**



**Action of plant rocks**





# Types of Chemical Weathering

Reaction With Water



Reaction With Acid



Reaction With Oxygen



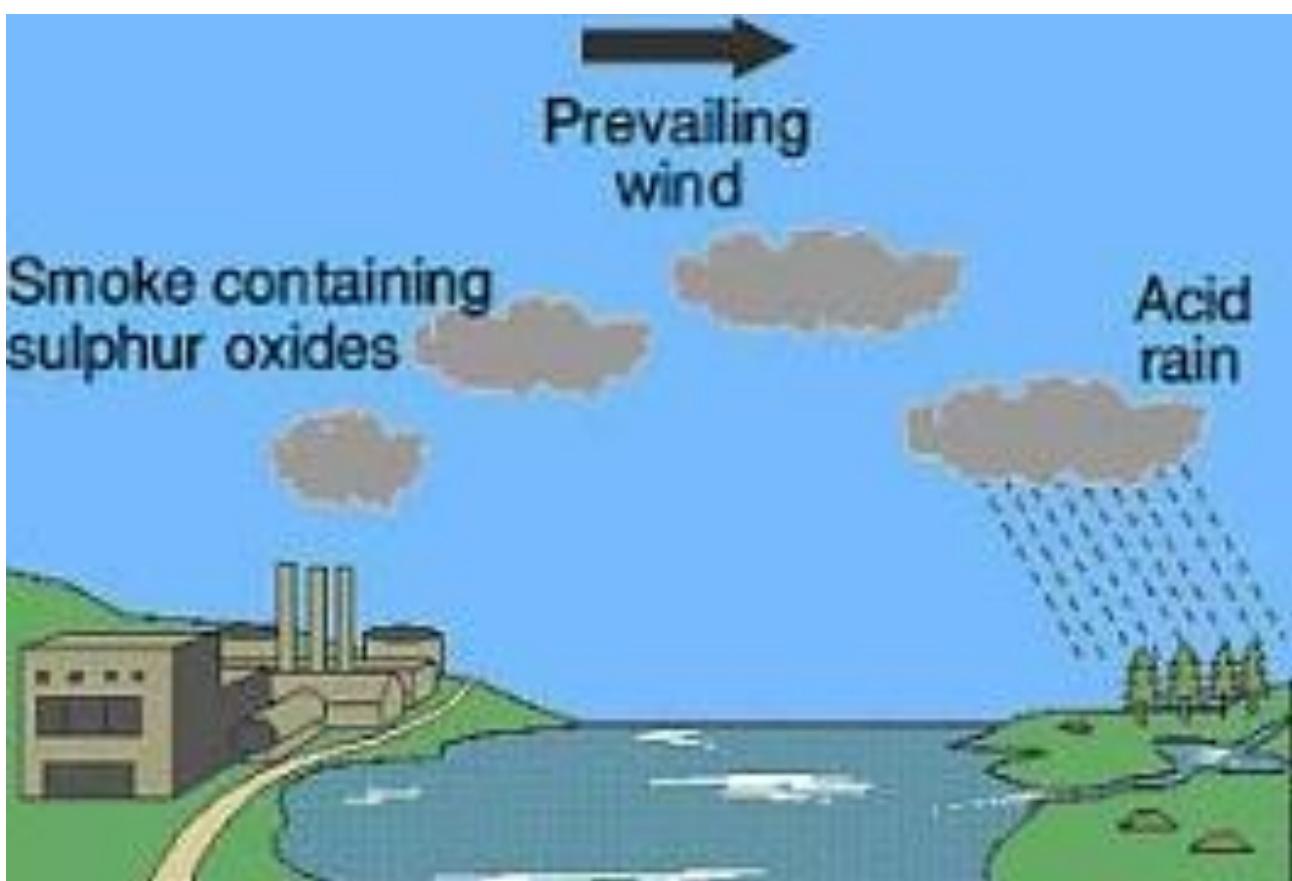
Reactions With Organisms

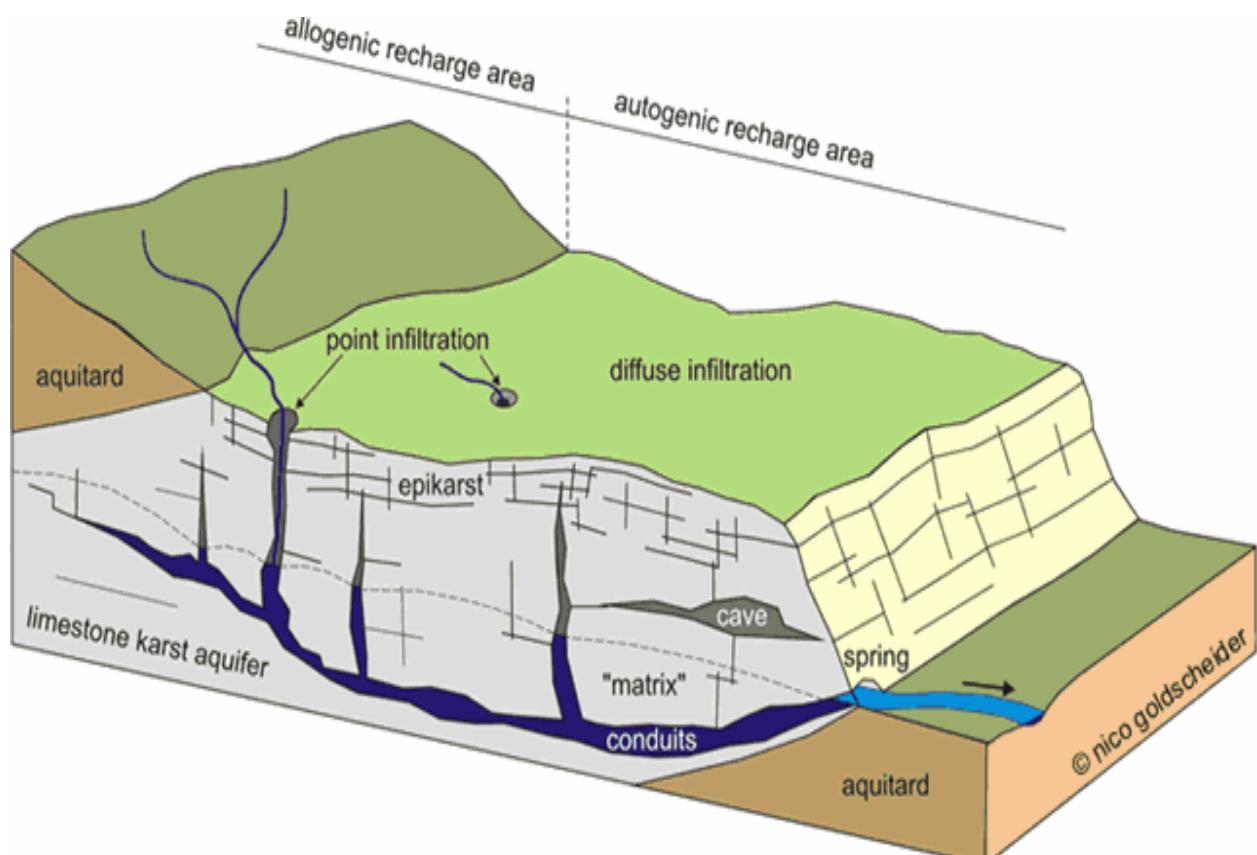
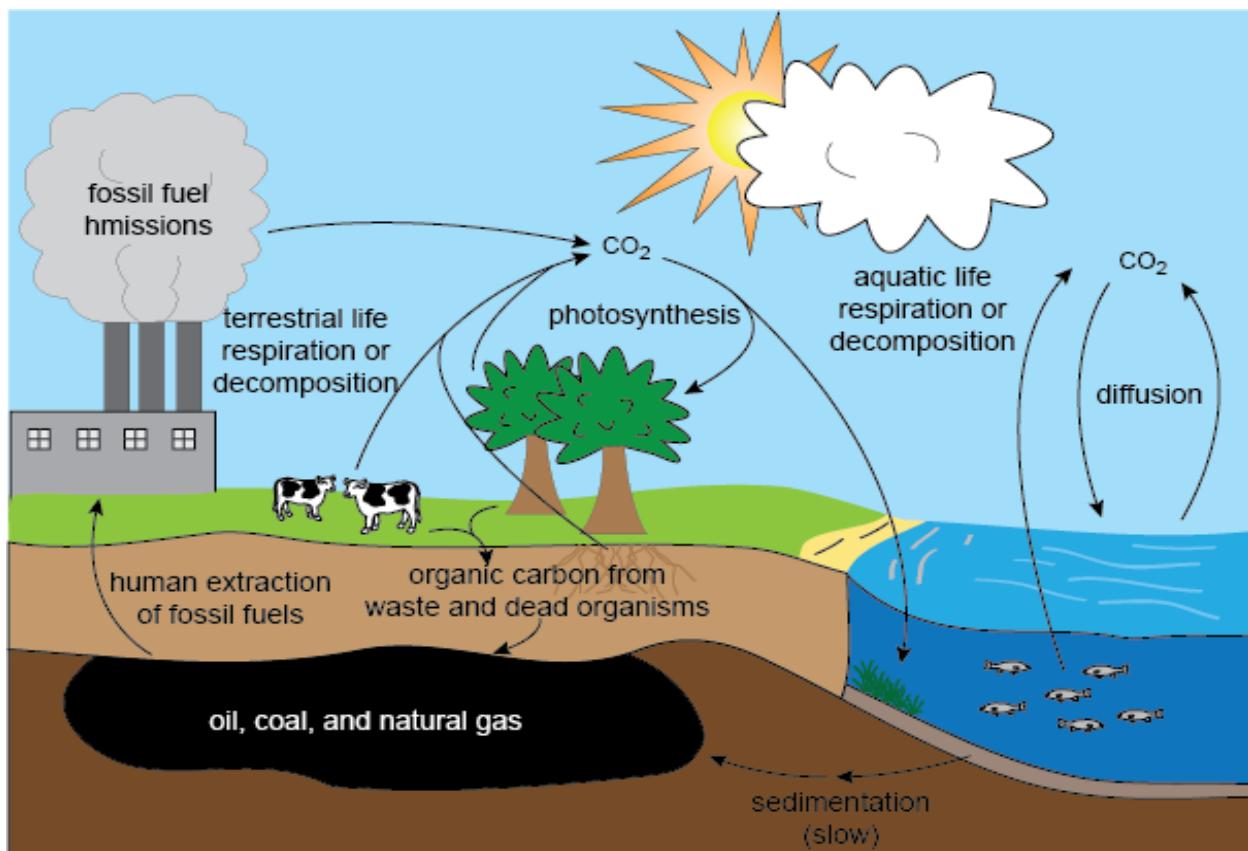


D.



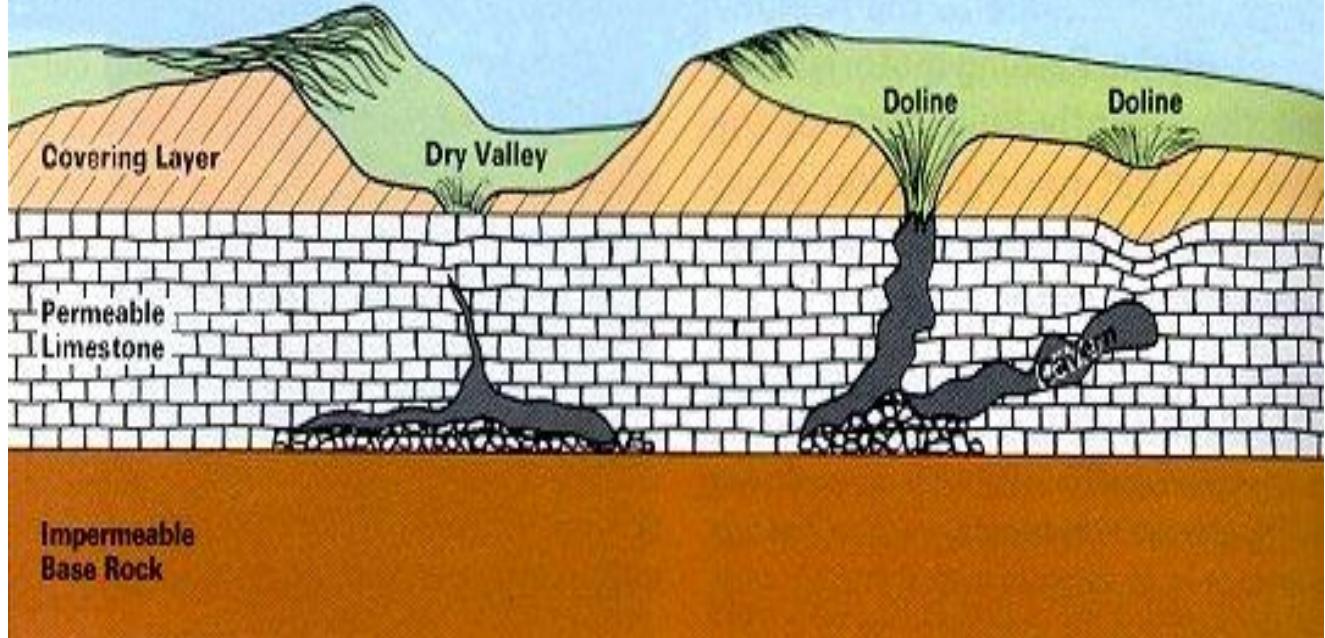
Chemical weathering on Marble rocks in Australia



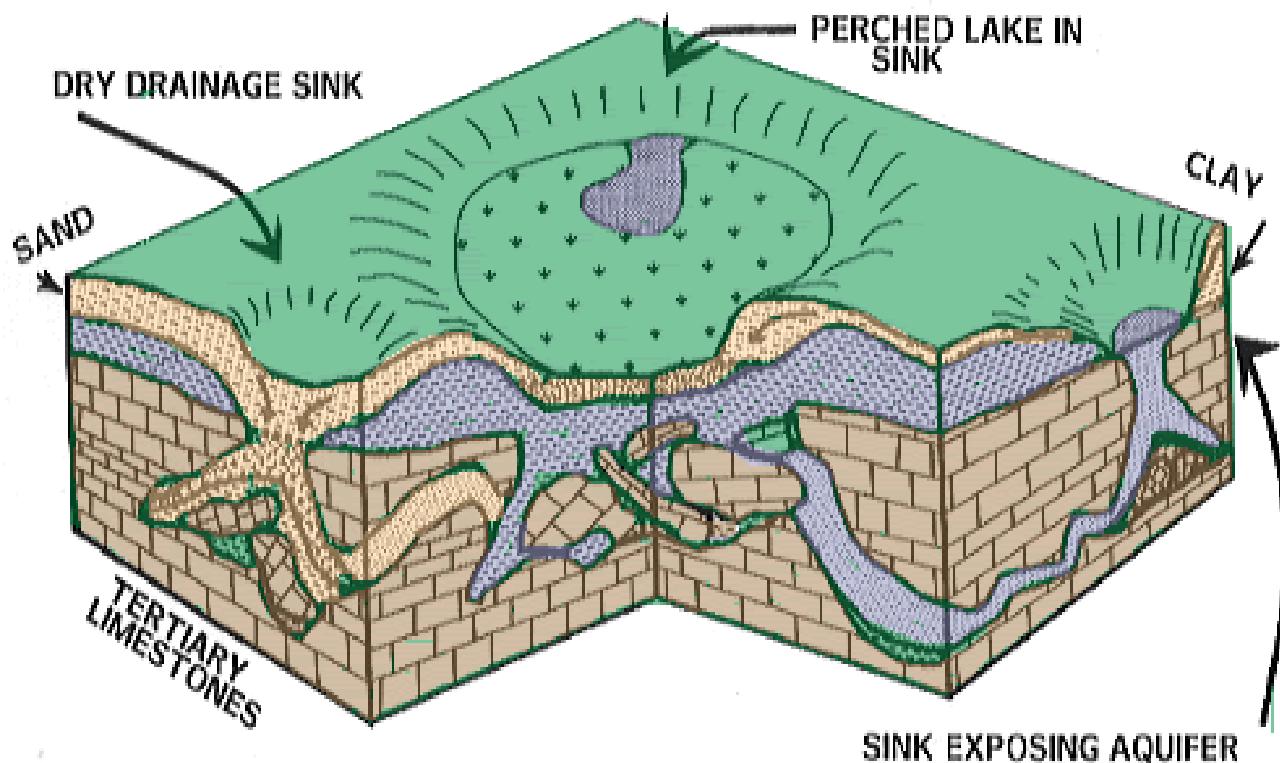


# Karstic Landscape

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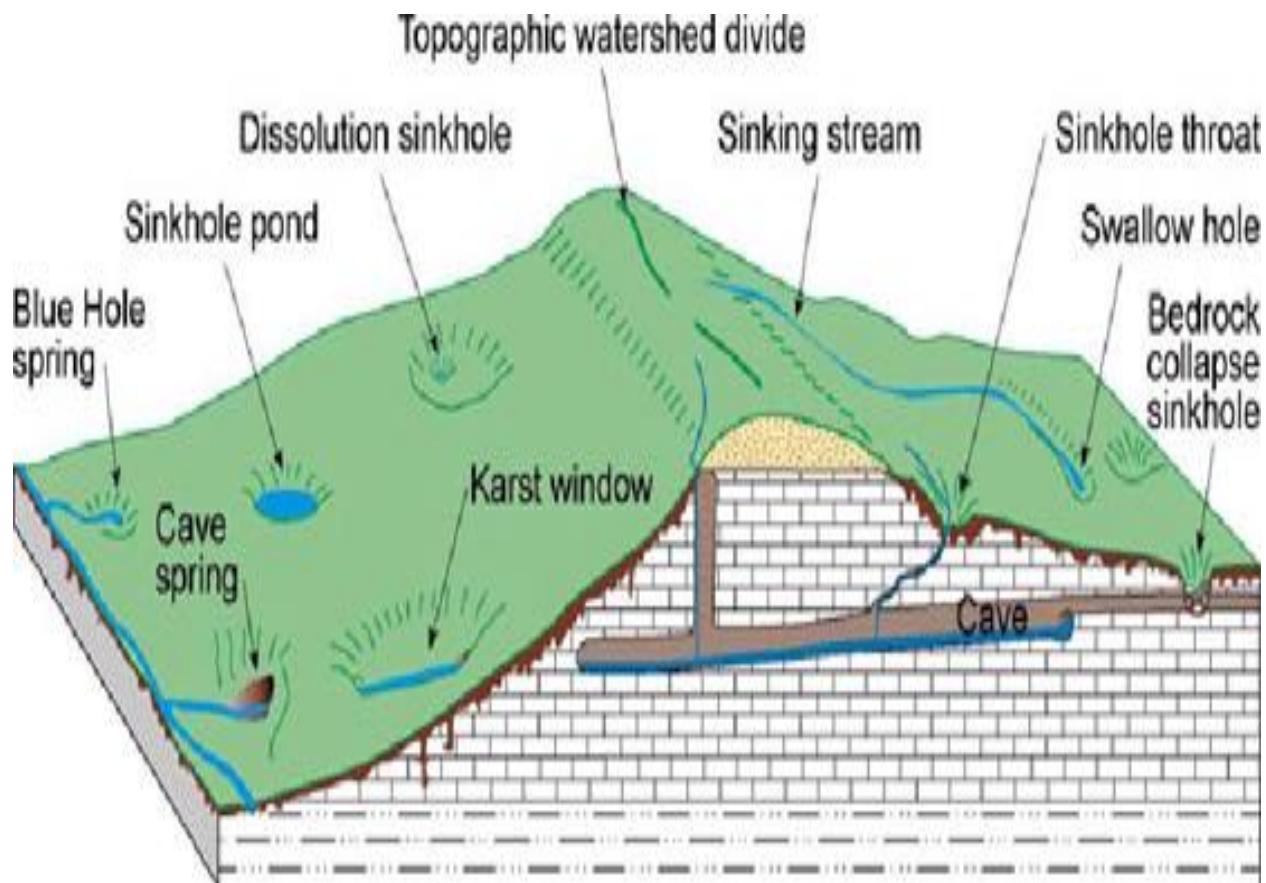
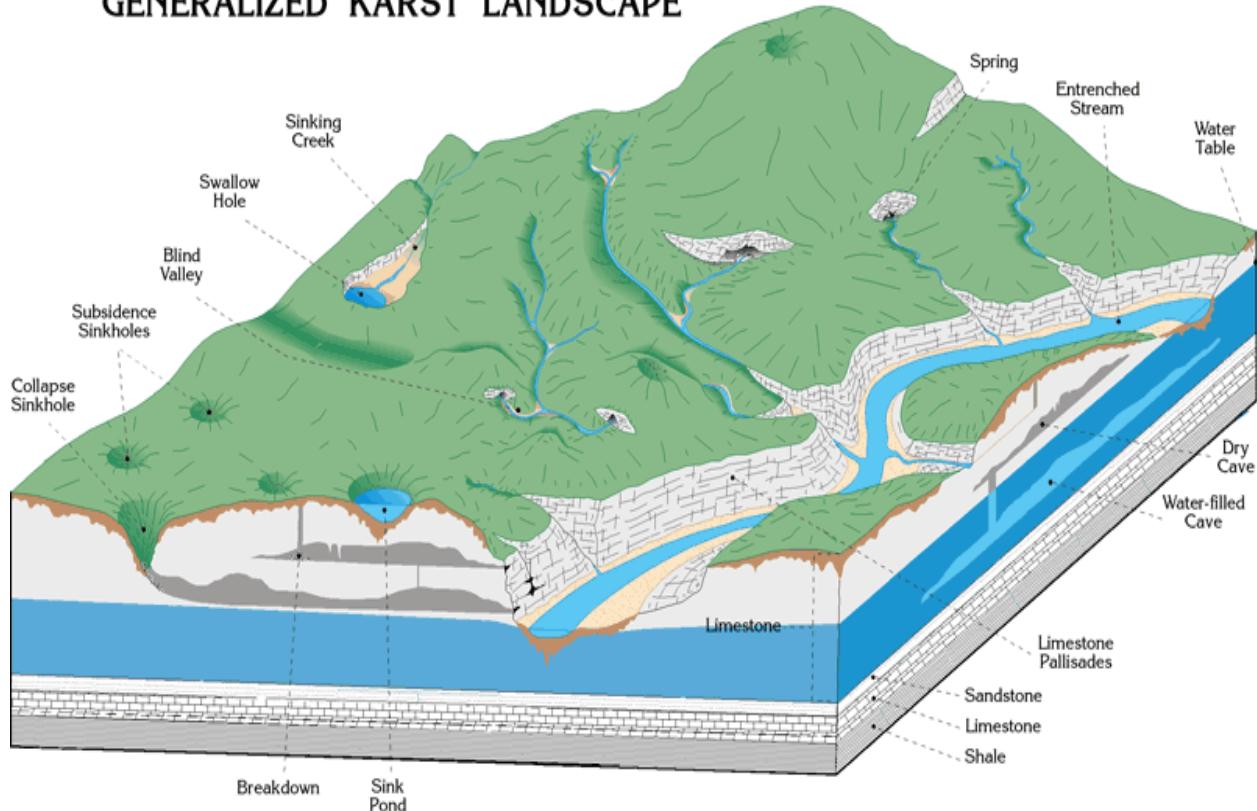


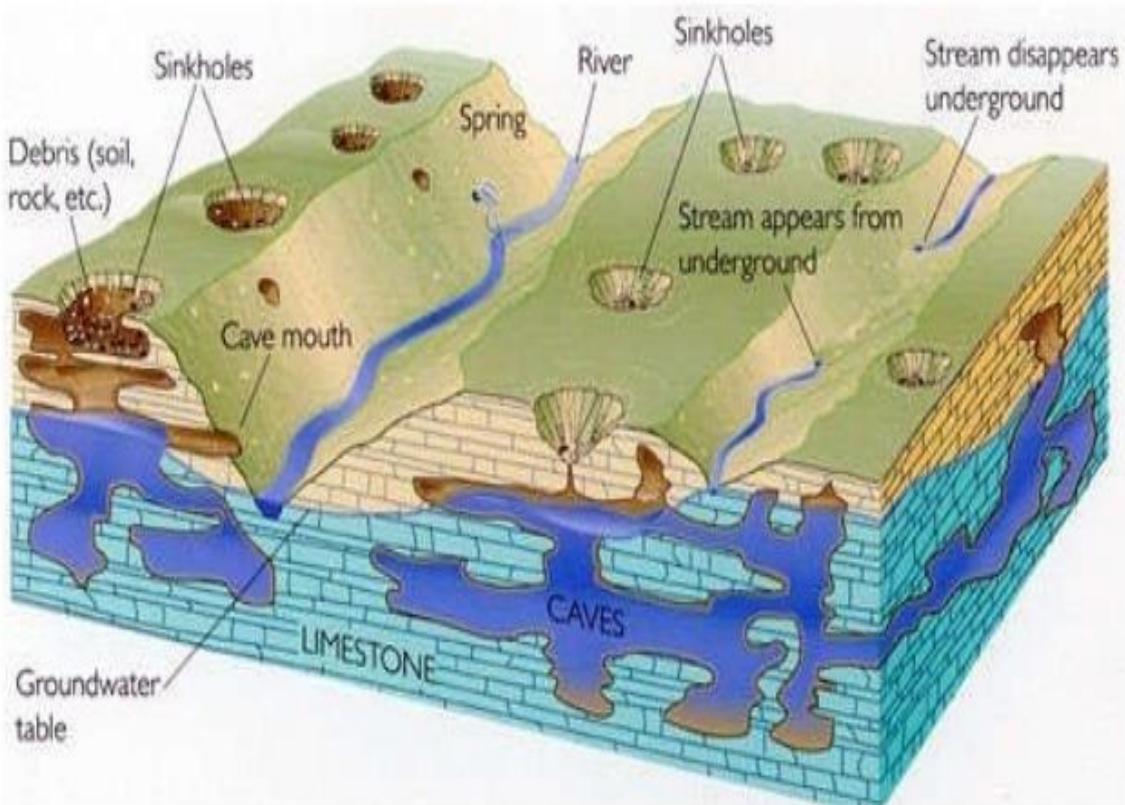
## MARGINAL REGION KARST SINKHOLE HYDROLOGY



## GENERALIZED KARST LANDSCAPE

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**Sinkholes**



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### **Limestone Gorge**

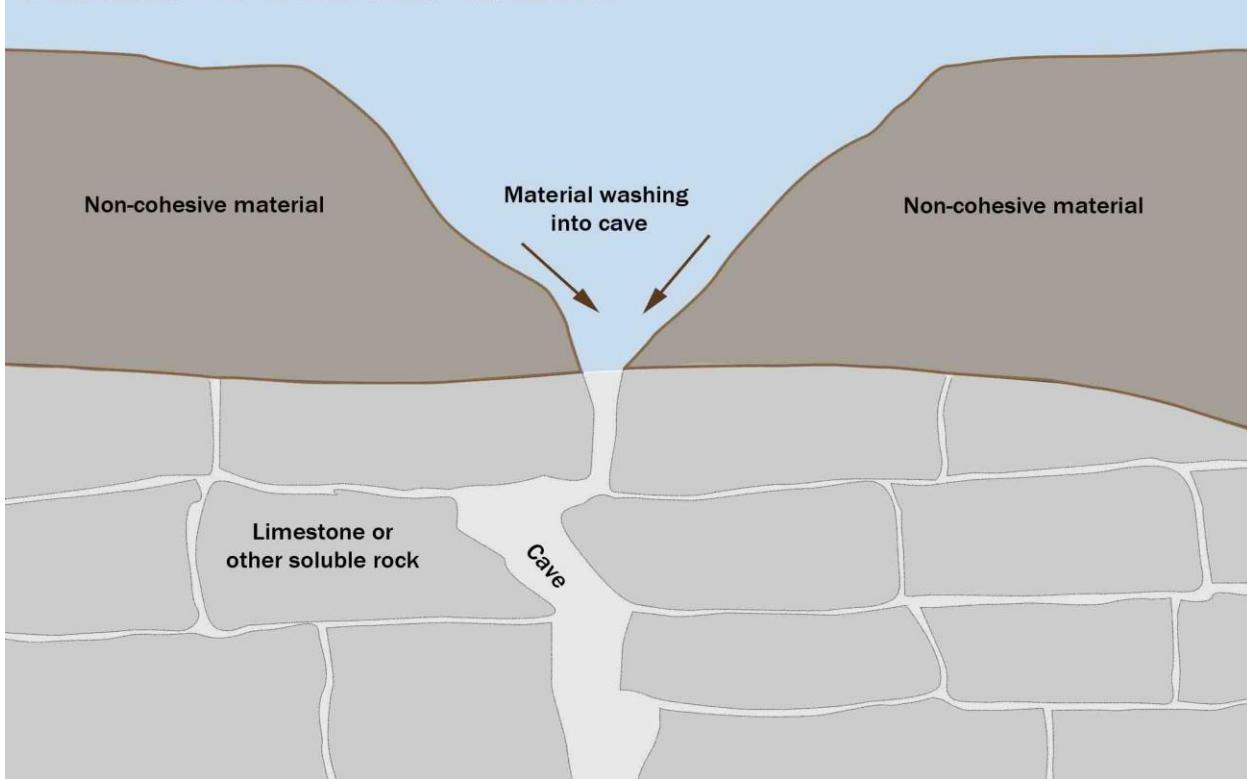


### **Sinkholes**



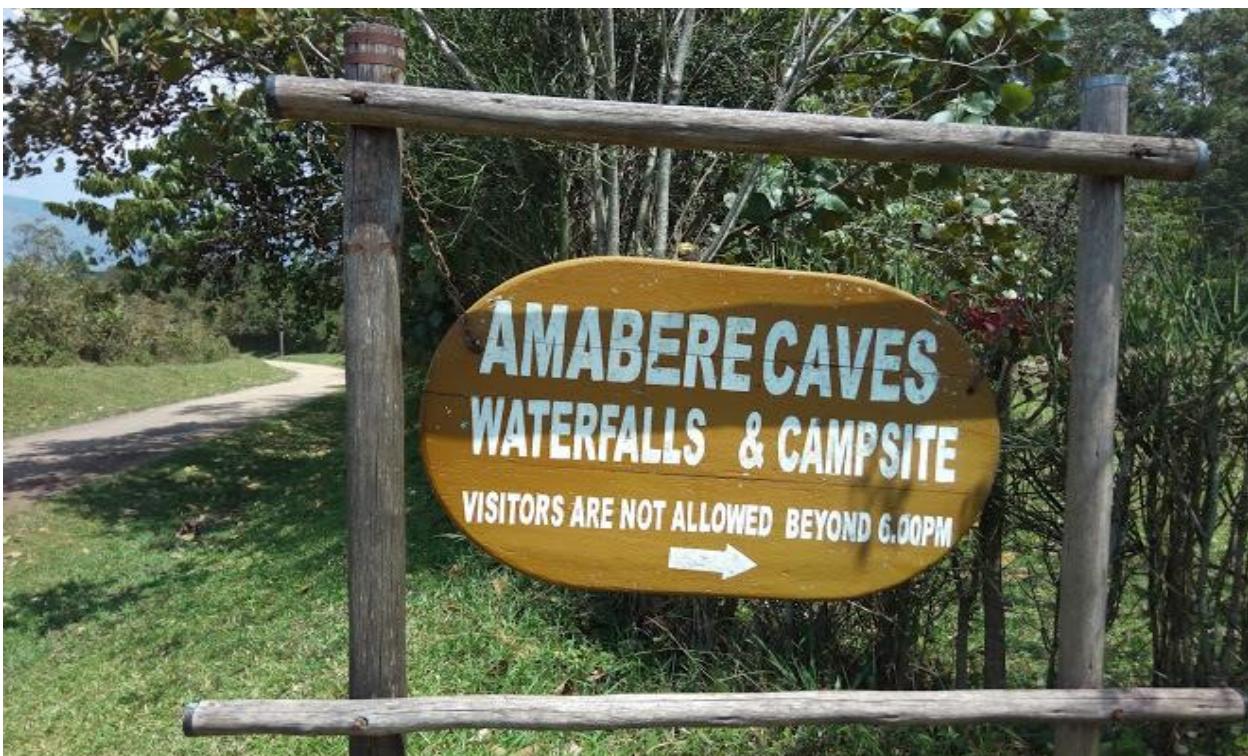
### Sinkhole

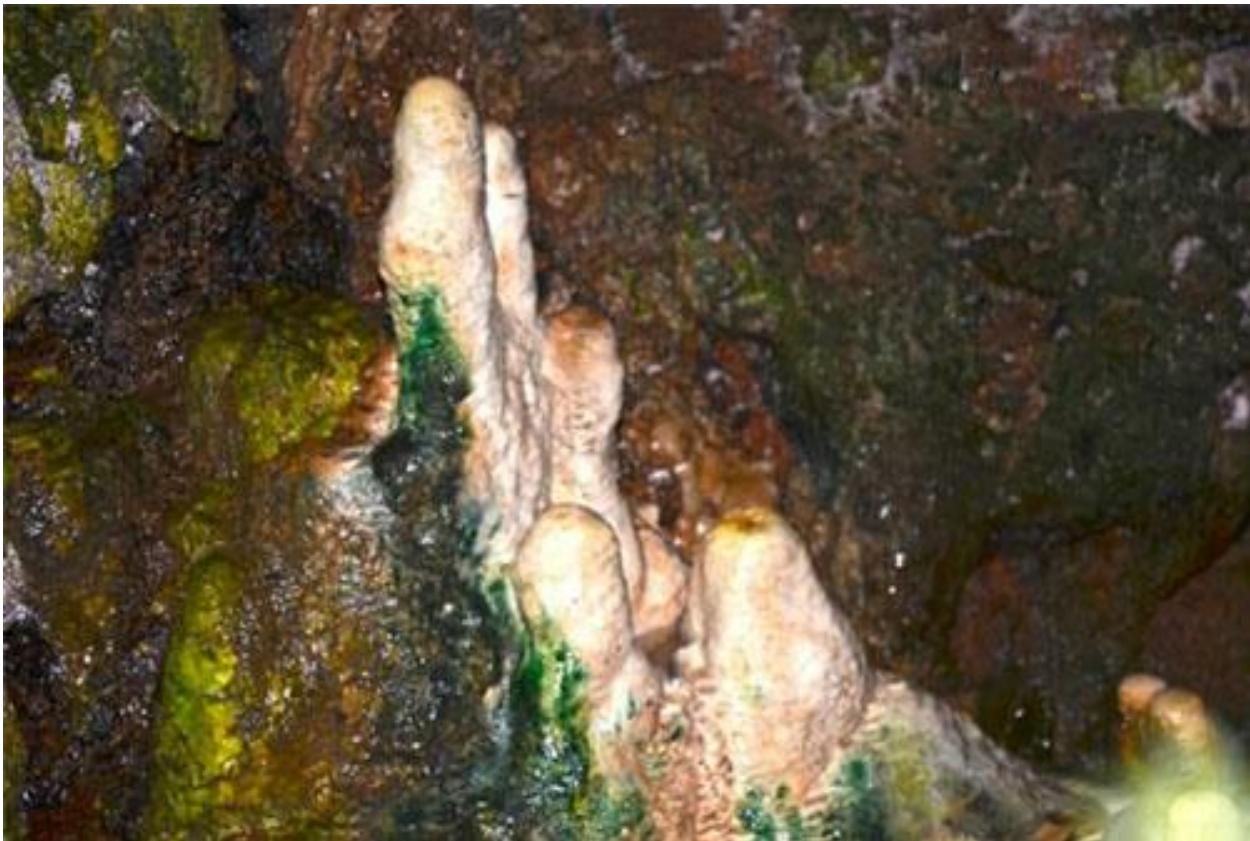
#### FORMATION OF A SUFFOSION SINKHOLE





**Sinkhole**





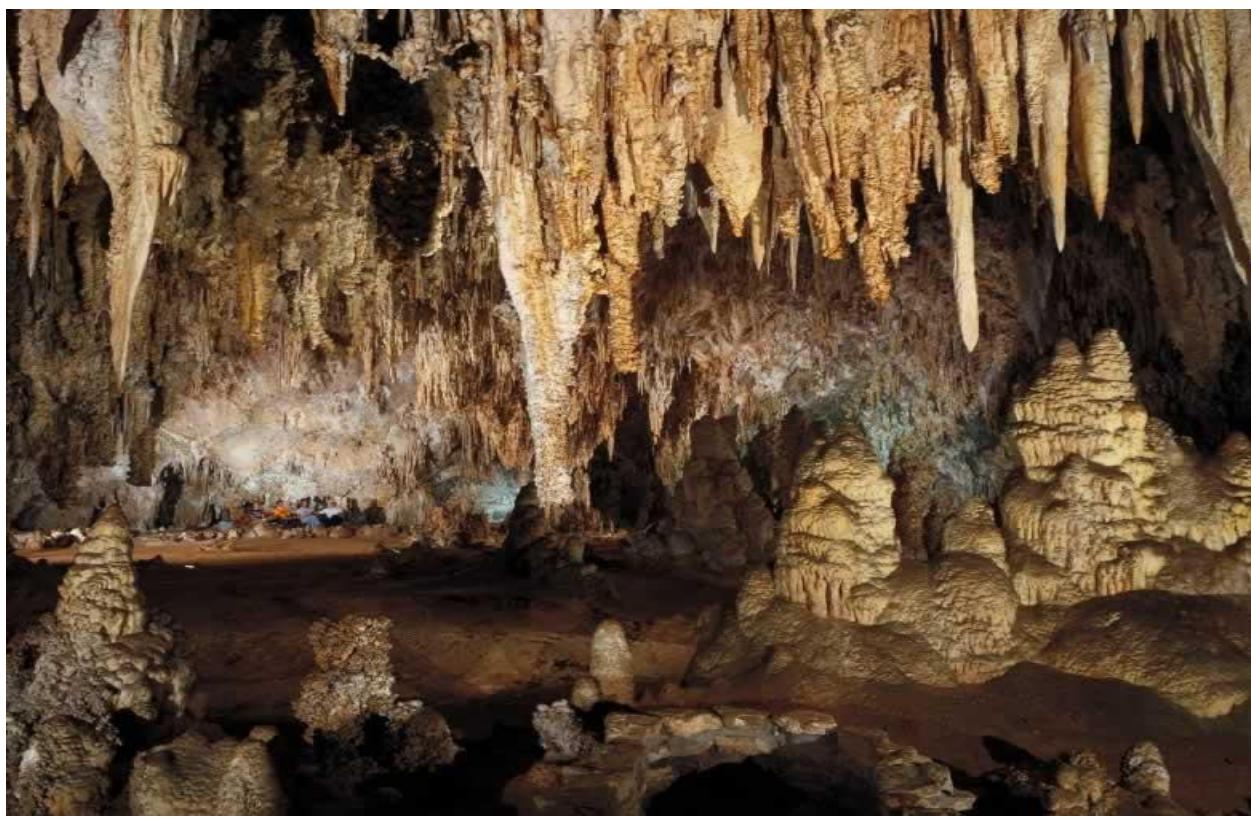
**Stalagmites at Nyakasura**



**Limestone pillar, Stalacites and Stalagmites at Nyakasura**



**Amabere Caves at Nyakasura**



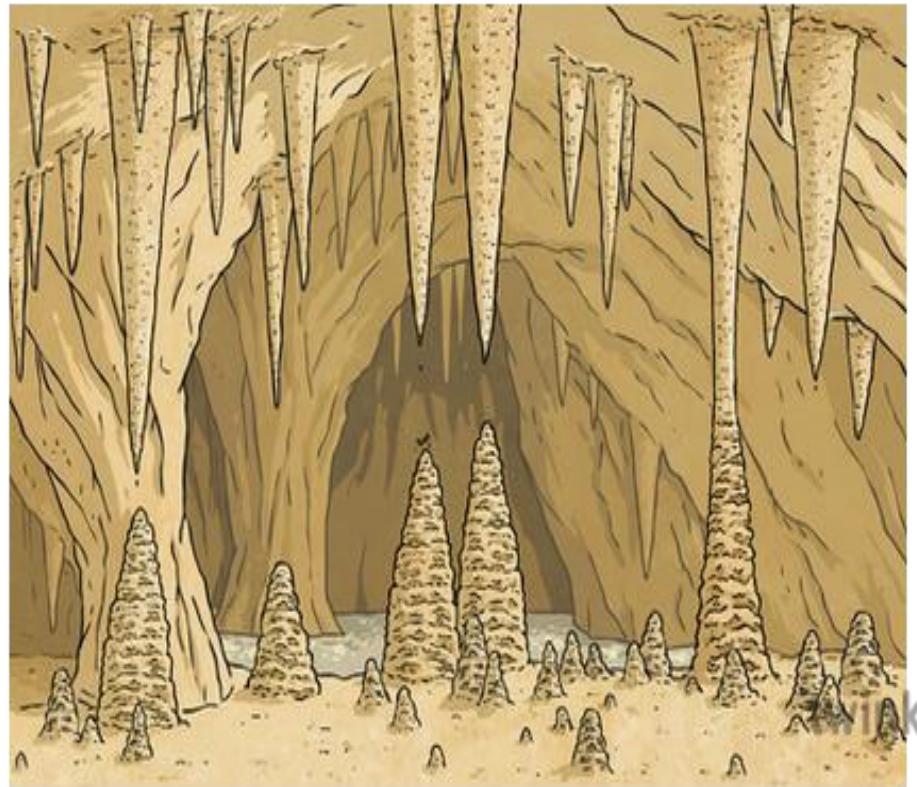
**Stalactites and Stalagmites**



**Stalactites and Stalagmites**



**Stalacites**



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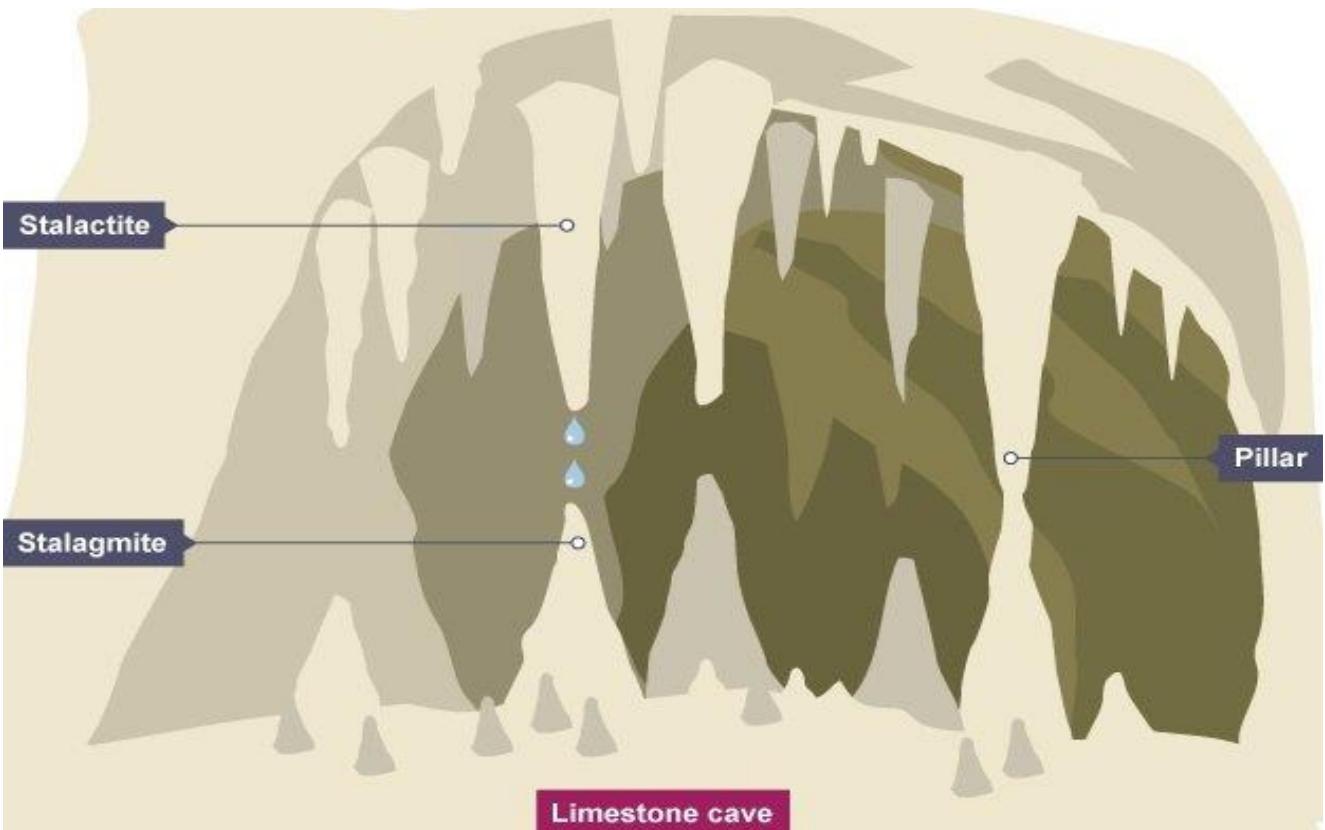
**Limestone pillar, Stalacites and Stalagmites**



**Stalactites at Nyakasura**

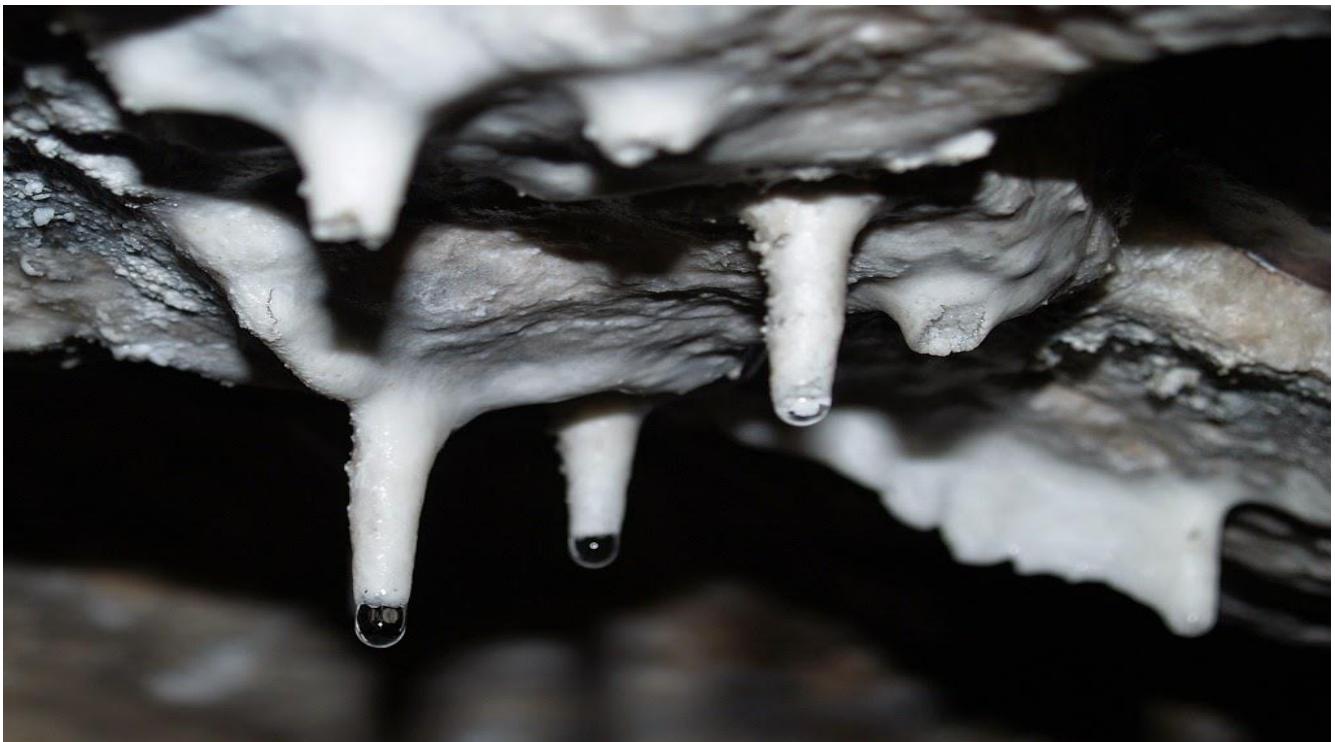


**Calcium Bicarbonate solution from the roof of cave**

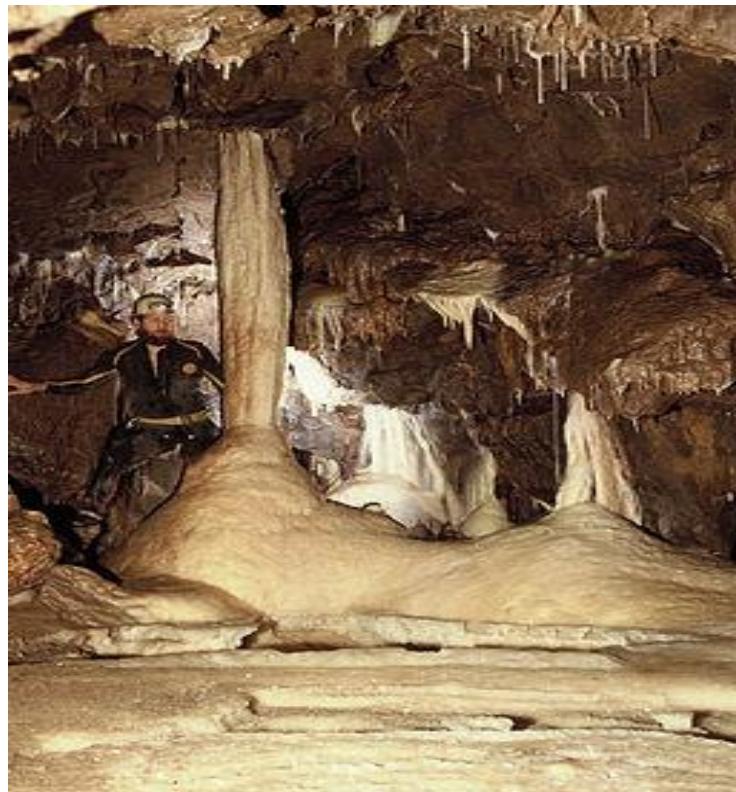




Meramec Caverns - Stanton, MO



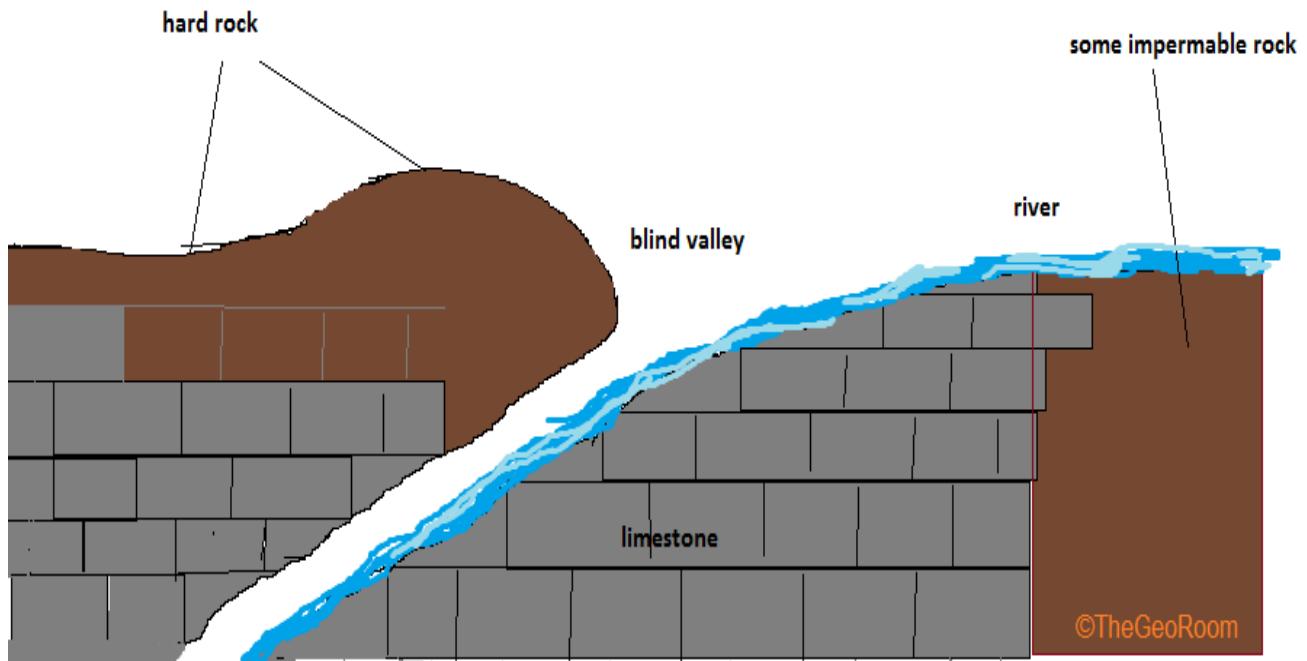
**Calcium Bicarbonate from stalactites**



**Limestone Pillar**



**Dry limestone valley**



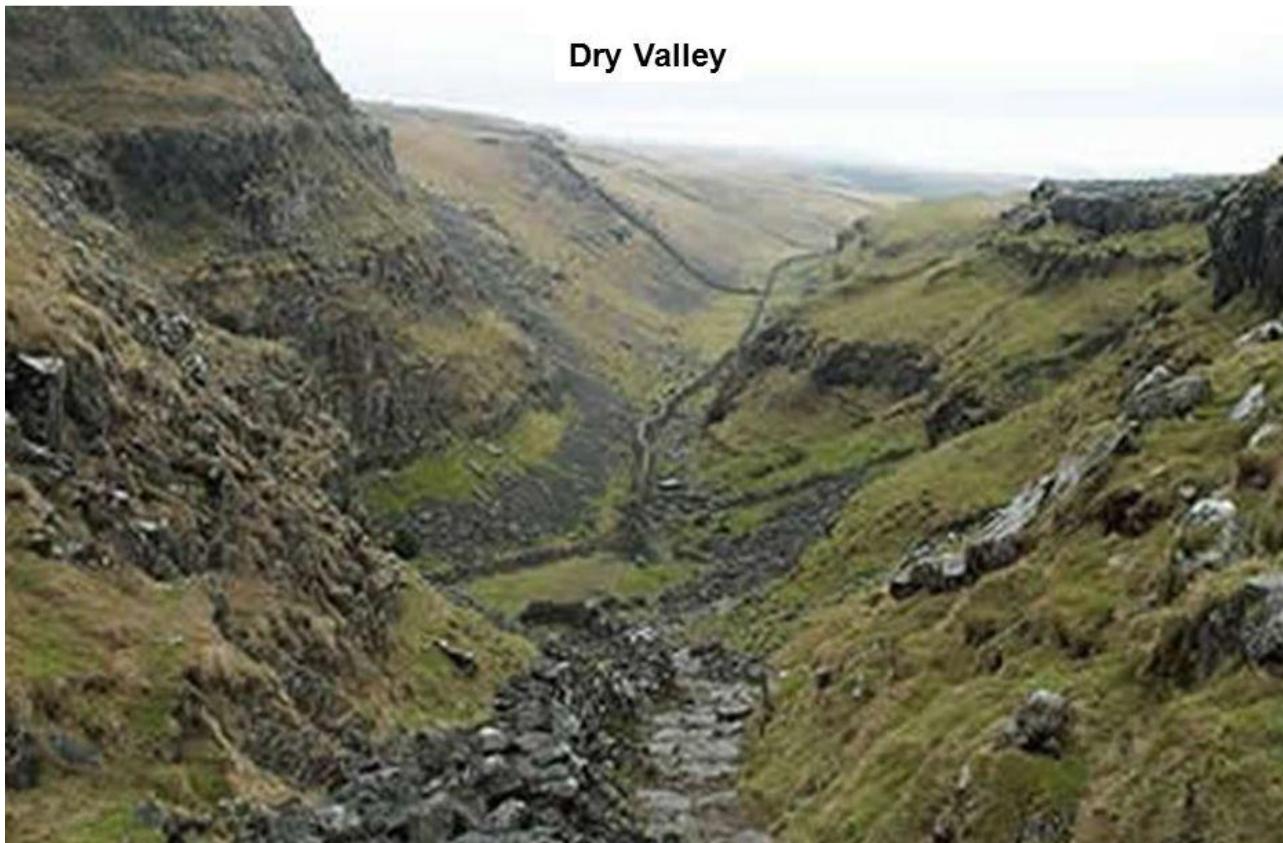
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**Dolines**

**Dry Valley**

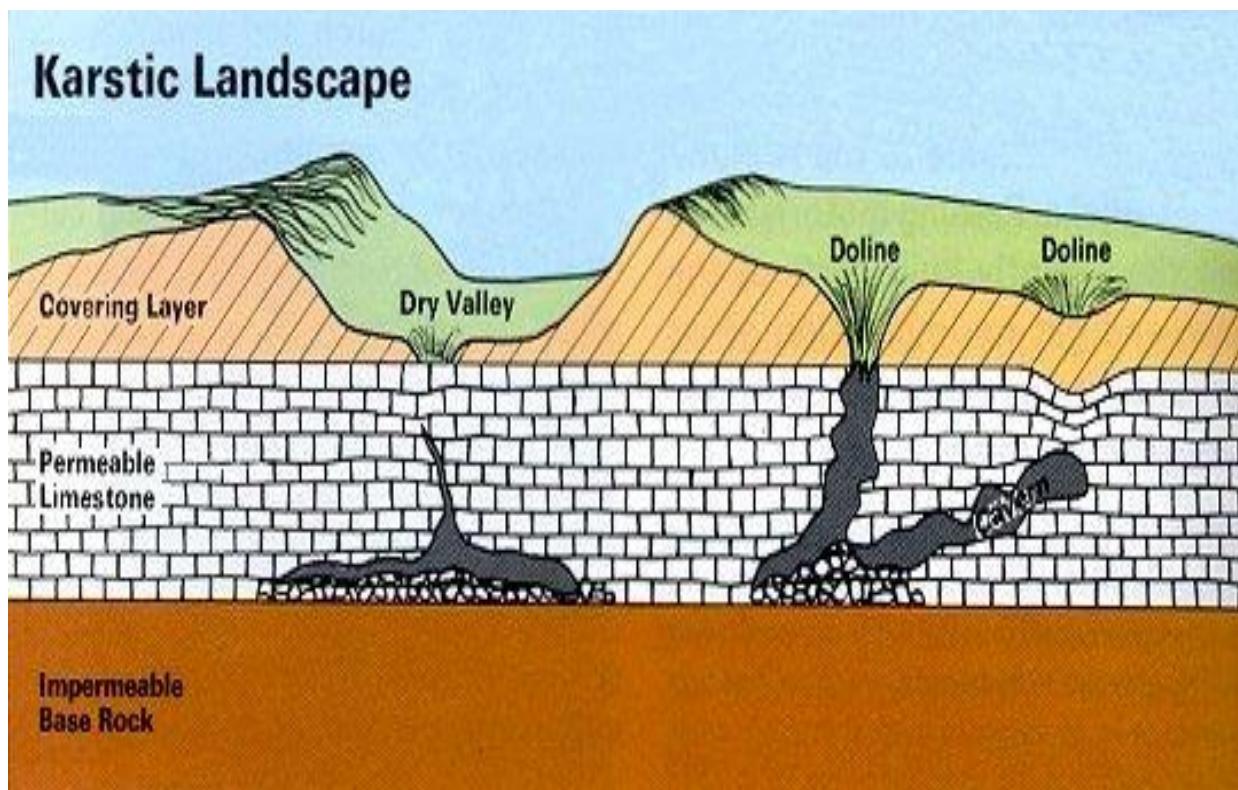
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**Dry valley**

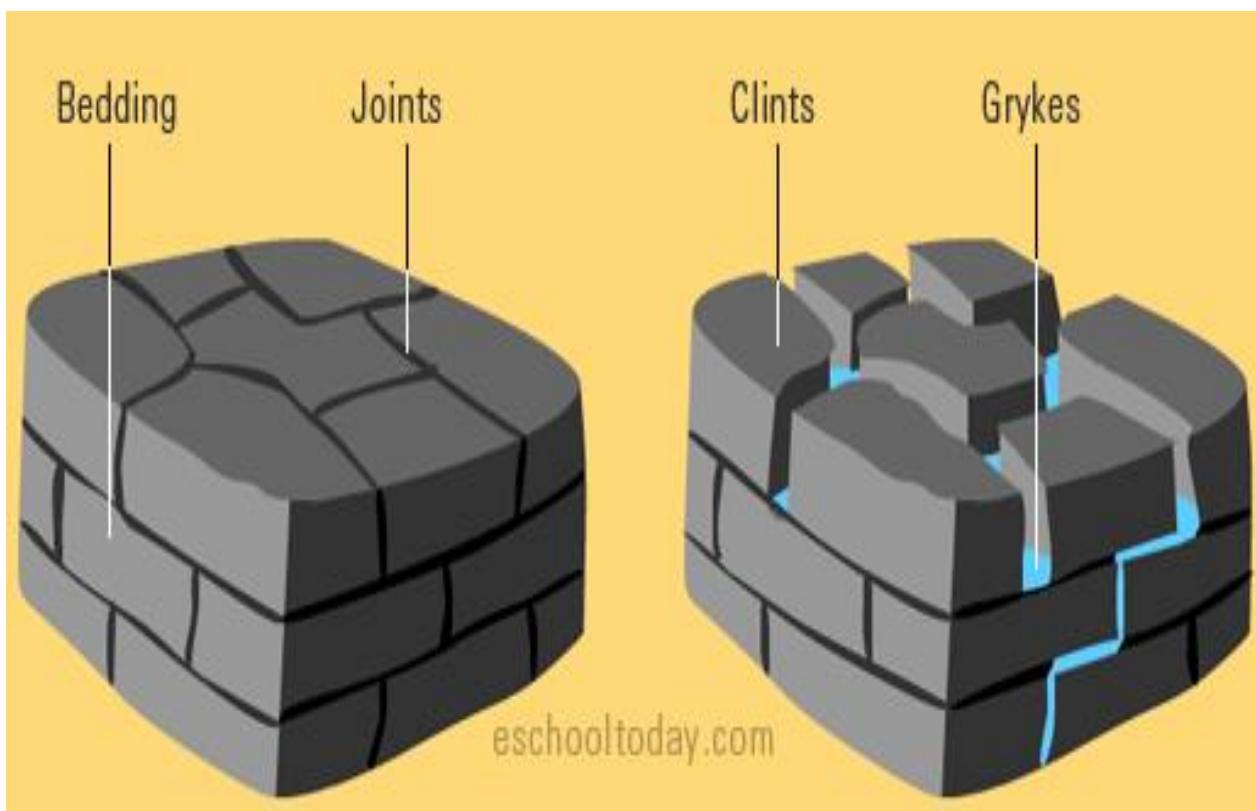


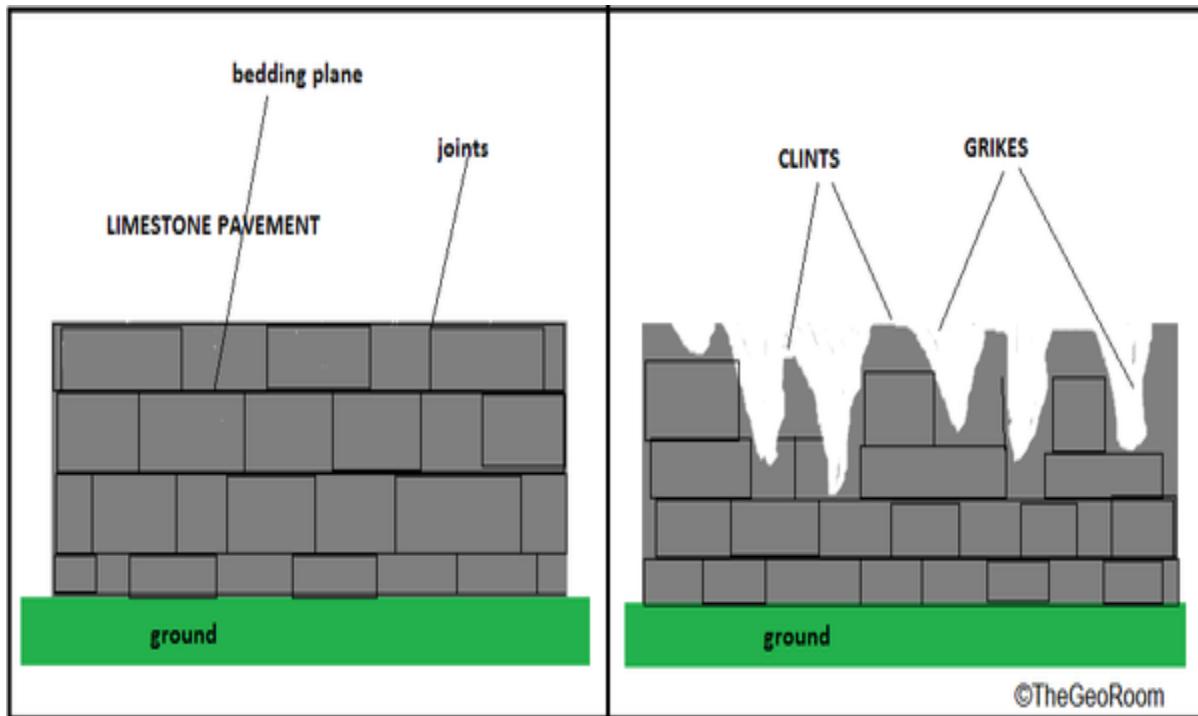
**Limestone gorge**





**Clints and Grykes**





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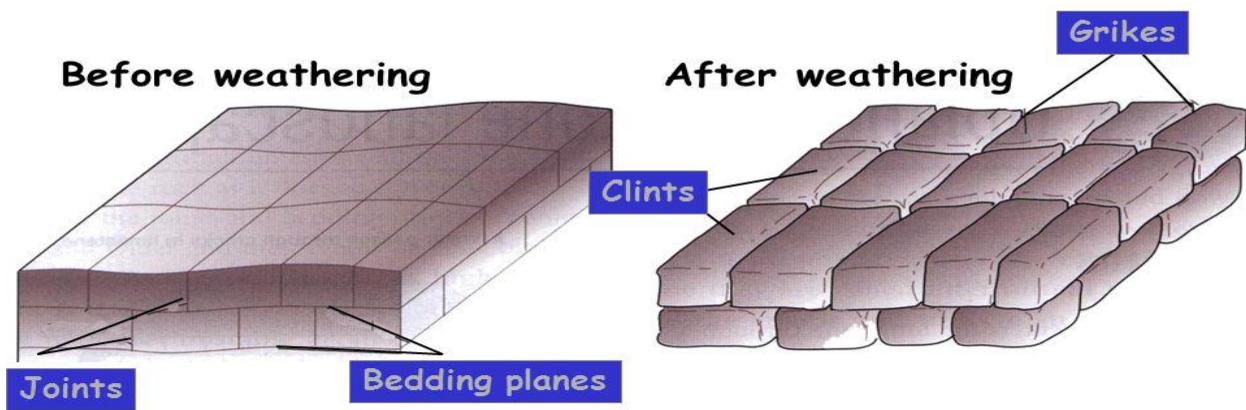


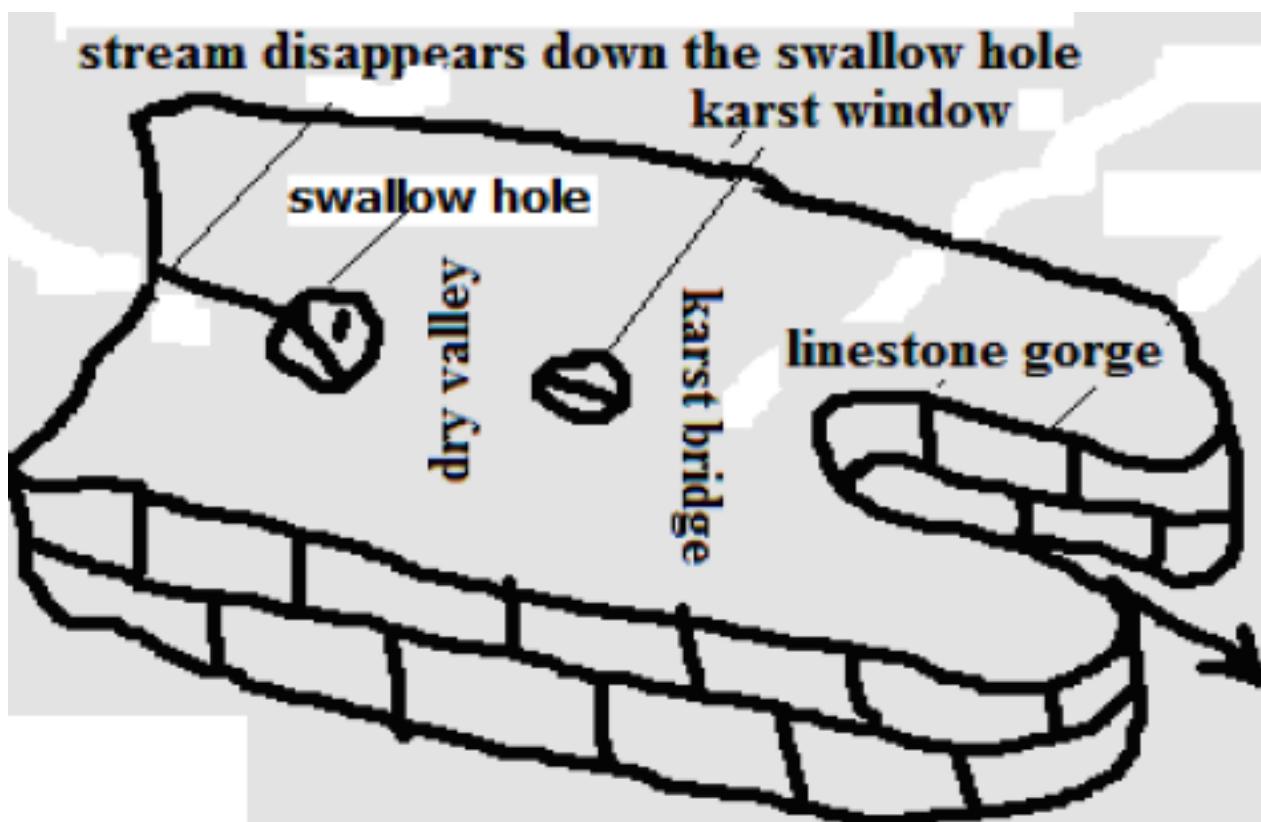
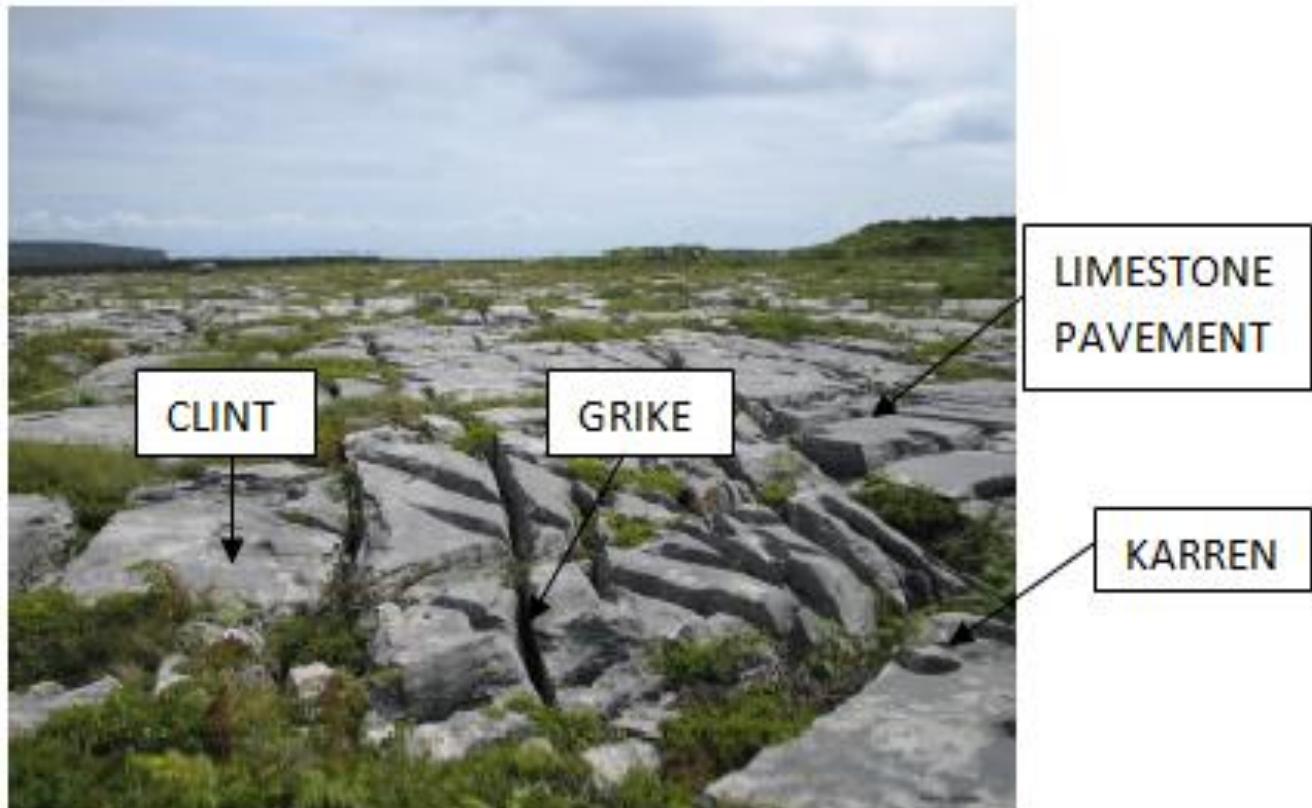
**Clints and Grikes**

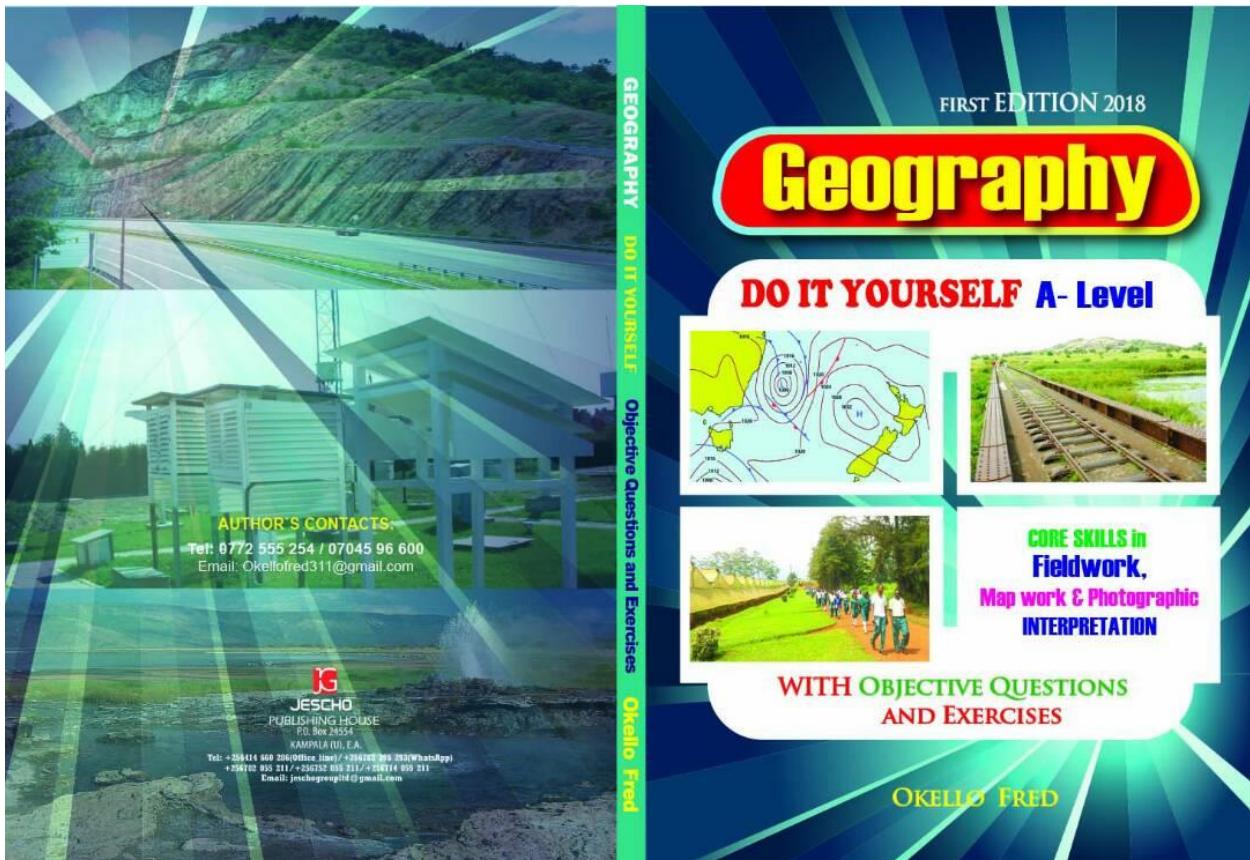


**Clints and Grikes**

## Limestone Pavement







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