

# THE SOILED GLACIOFE

(Opportunity for Excellence, Soil, Weathering, Glaciers)

Name:

Due:

Why should we study soil? What is the importance of this unit?

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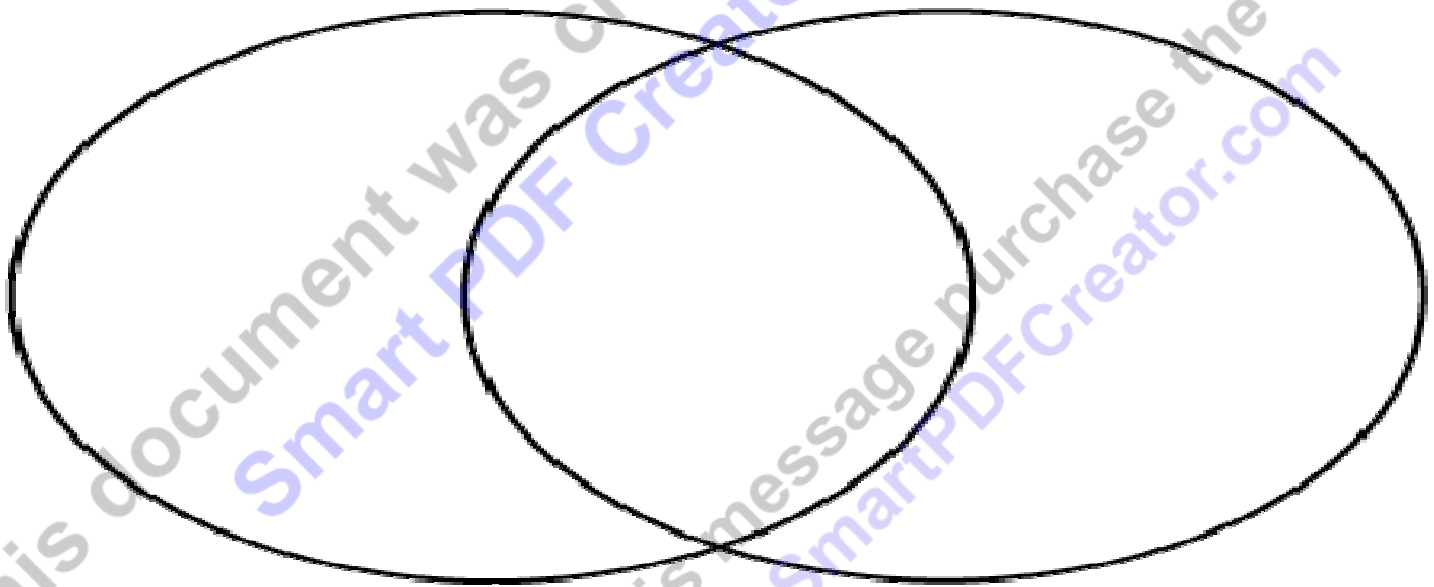
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What are the similarities and differences between mechanical and chemical weathering.

Mechanical Weathering

Similarities

Chemical Weathering



Please describe the type of mechanical weathering represented by the pictures below.

**Pictures have been removed to lower the .pdf file size**

Picture of... Arch / wind weathering

**Pictures have been removed to lower the .pdf file size**

Picture of... Frost Wedging

Please describe the type of mechanical weathering represented by the pictures below.

**Pictures have been removed to lower the .pdf file size**

Picture of... Root wedging

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Picture of... Exfoliation

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Picture of... Thermal Expansion

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Picture of... Mole / Animal Weathering

Please describe two types of chemical weathering below. Use illustrations to support text.

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Warning! Two part question -Please describe the types of weathering that is occurring on this tombstone, Next, describe the synergism between mechanical and chemical weathering?

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Picture of... Tombstone with linches and frost wedging

What is occurring in the photo on the right?

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Picture of... Trees and soil slump

Please label 1-5 the order that the rocks below will weather

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What is the difference between dirt and soil? \_\_\_\_\_

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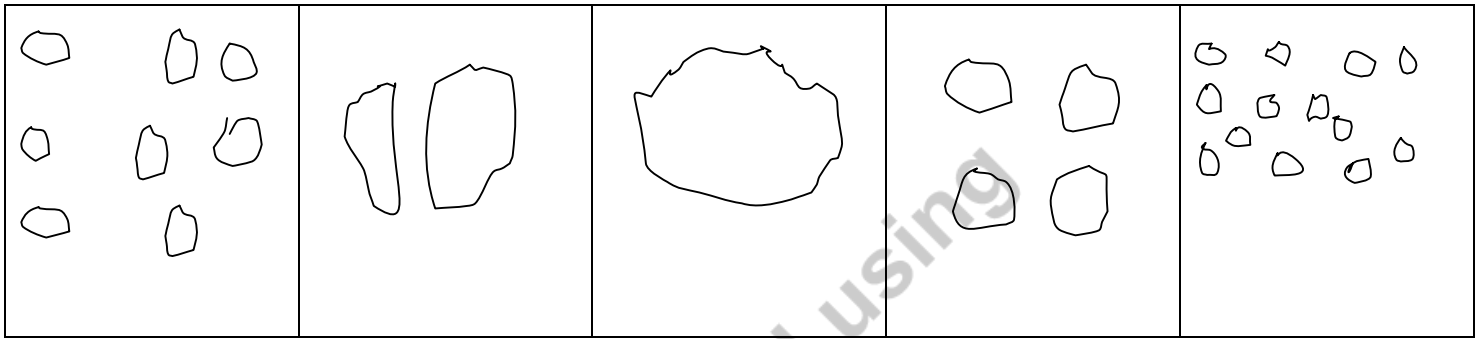
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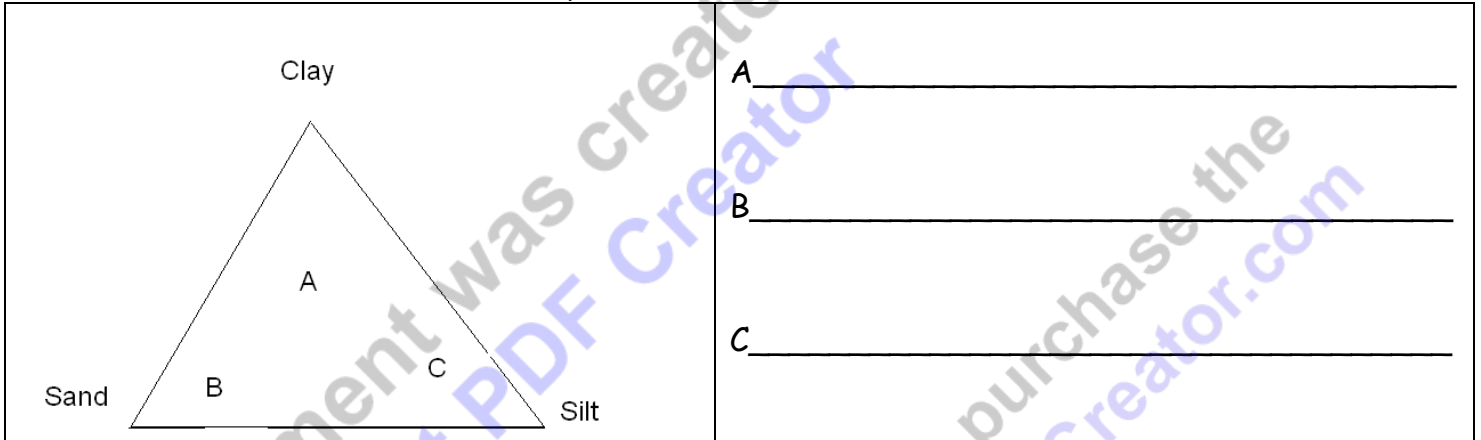
Please color the box below to represent poor soil. Explain why you colored it the way you did?

Please color the box below to represent healthy soil. Explain why you colored it the way you did?

Please label 1-5 the order that the rocks below will weather



Describe the soil content of soil sample A, B, C



Please label as Boulder, Gravel, Sand, Loam, Silt, or Clay

I am the best at holding nutrients?

\_\_\_\_\_

I am the largest particle in this group?

\_\_\_\_\_

I am the smallest particle in the group?

\_\_\_\_\_

I have the greatest porosity and permeability?

\_\_\_\_\_

I have the least porosity and permeability?

\_\_\_\_\_

I am the best for growing plants?

\_\_\_\_\_

I am very easy to work and move

\_\_\_\_\_

I am very difficult to work and move?

\_\_\_\_\_

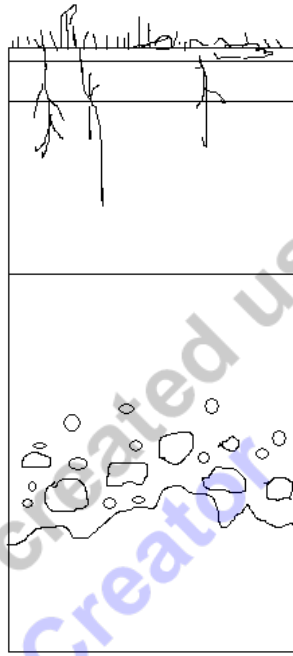
I am 33% Sand, Silt and Clay?

\_\_\_\_\_

I am larger than Clay but smaller than Sand

\_\_\_\_\_

Complete the soil horizon below.



What is erosion, and why is it so important to protect soil? \_\_\_\_\_

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Please describe what the Dust Bowl was, the reason's it occurred, and describe the hardships it created from the eyes of a mother trying to feed her family in the middle of it.

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Picture of... Mother with children during the Dust Bowl.

Please describe the correct soil conservation method beneath the pictures below.

<p><b>Pictures have been removed to lower the .pdf file size</b> Picture of... Alley Cropping</p>	<p><b>Pictures have been removed to lower the .pdf file size</b> Picture of... Strip Cropping</p>	<p><b>Pictures have been removed to lower the .pdf file size</b> Picture of... Wind Breaks</p>
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Please describe the correct soil conservation method beneath the pictures below.

<p><b>Pictures have been removed to lower the .pdf file size</b> Picture of... Crop Rotation</p>	<p><b>Pictures have been removed to lower the .pdf file size</b> Picture of... Manure / Increasing fertility</p>	<p><b>Pictures have been removed to lower the .pdf file size</b> Picture of... Terracing</p>
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Use the map below to describe North America about 20,000 years ago. Make sure to include ice sheets, alpine glaciers, and use the boxes to discuss some Paleoecology at the time,

<p><b>Pictures have been removed to lower the .pdf file size</b> Picture of... North America</p>
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Please discuss how this rock arrived in the position that is, and why it is shaped the way it is?

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Picture of... Glacial Erratic on the Edge of a cliff.

Please identify and then describe the specific type of the glacial landforms below. In some cases more than one can be identified.

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Picture of... U-shaped Valle

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Picture of... Glacial Striations

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Picture of... Horned Peak

Please identify and then describe the specific type of the glacial landforms below. In some cases more than one can be identified.

**Pictures have been removed to lower the .pdf file size**

Picture of... Kettle Lake

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Picture of... Fjord

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Picture of... Cirque, Tarn, Arete

<p><b>Pictures have been removed to lower the .pdf file size</b> Picture of...Drumlin</p>	<p><b>Pictures have been removed to lower the .pdf file size</b> Picture of...Esker</p>	<p><b>Pictures have been removed to lower the .pdf file size</b> Picture of... Moraine</p>
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What theory for why ice ages occur do you prefer? Why? \_\_\_\_\_

Find and circle words associated with soil, weathering, ice ages, and glaciers. 30+ can be found! They can go forward and backwards.

EROGSOILGHYLMCHANICALWEATHERINGUGHQMSCHEMICALGH  
 IDLWFRFROSTWEDGINGMGARCHHGLOROOTWEDGINGHEMOLEKH  
 R  
 TGFOLIATIONHNMOMUHOYRPRCKSVHKTHERMALEXPANSIONYTW  
 THRELICHENSCARBONATIONGHANGLEOFREPOSENMYHJERETYES  
 R  
 ETYEMYEAREOXIDATIONHUSTALAGMITERTILOVEOFESITHJSOI  
 L  
 ISOSSLUMPHDIRTMNBOULDERJHYCOBBLEMNFGGRAVELIYPPEERC  
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 INDBREAKJNMANUREGLACIERJERRATICGICEBERGMAMMOTHDRS

TYTALUSCARCAIRNUSTRIATIONSUSHAPEDVALLEYFJFJORDTYTA  
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OTHISWASTHEMOSTANNOYINGTHINGIHAVEEVERDONEIMYLIFE  
I  
NEVERWANTTOSOMETHINGLIKETHISEVERAGAINANDIAMSOGLA  
D  
WOWMADISONBOULDERKRLAKEMISSOULAKETTLELAKEEREVOSTI

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