

WEATHERING & EROSION

Earth's surface is not flat because of different landforms it has which are a result of Internal Processes of Earth.

The difference between the highest of Lowest point on the Earth is 20km.

Internal Processes are pretty quicker.

External Processes

- · Their work is slow & not of great magnitude
- · It is the work of rivers, glaciers, waves, winds etc
- · Land forms aren't built by them.

Gradation

- · Gradation means to being Earth's surface to a common level
- it is not possible to achieve loccur.
- · The central part of Australia The cobal Plain is somewhat like a peneplain but it is not a peneplate completely.
- · Agents of Gradation: Rivers

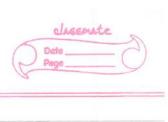
waves winds glaciers.



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	Degradation Aggradation
	Tion to Infames utnithing par
	charge of training water
	Sub Processes
	Degradation-eroding of mountains
	Aggradation-uplifting of sea floor
	The process of degradation is brought about by weathering.
	L. Herbanisan Wanthering among the area
	weathering is breaking up of rocks.
•	It is not just breaking up of rocks, but it
	is also IN-SITU which means as is where is;
	they are broken at the same place where
	they are questioned and mainted to the
	Broken Rock fragments are called regolith
	INSITU- signith lies at the same place where
307	causes of weathering Roots of trees
•	causes of weathering Roots of trees
	are slow & static Atmospheric gases
	· Moisturising atmosphere
	· Burrowing of
	animals
	· Heat (thermal
	expansion)



Exosion is breaking up of rock followed by immidiate removal of regolith . It is an non insitu process . Causes, of Exosion -> running water are faster & glaciers dynamic wind sea waves Types of weathering: . Mechanical Weathering: . Agents -> Temperature -> Pressure -> Pressure -> Frost		Date Page
. It is an non insitu process . causes, of Exosion → running water are faster & glaciers dynamic. wind sea waves Types of weathering: I. Mechanical Weathering: . Agents → Temperature . → Pressure . → Frost		Exosion is breaking up of rock followed
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→ Pressure → Frost		
→ Frost with an analysis and the same of the party of th		
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mechawin - ine break-up of rock is		Mechanism → The break-up of rock is
PHYSICAL PHYSICAL	J47 U	PHYSICAL
that is the y	SANATA	That is the
· Product -> The product -> rigoth is same		Product → The product + rigoth is same
as the parent rock.	Č.75	as the parent rock.
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michanical 00	•/	much and and
Granite mechanical weathering 000	5.0,710	Granite weathering
p panagerus	p 1	
Parent Rigolith is		Parent Rigolith is
Jon MilloRock Granite.	Jam	Rock Grante.
4 misanger		misanges



	Date Page
	Chemical weathering:
	Agents → Atmospheric Gases → Moistule
	Mechanism → The break-up of rock is
	chenical and and the south and
dy low.	Product → The product, that is the rigorith is different from than the parent rock.
13103	Tropical Regions
pain	Granite chemical weathering 000 A.
Man	Parent Rock Bausite.
-0114	Temperate Regions
- 122 AT	Granite chemical Rigolith/Produce is clay
	Parent Rock
	- Assistant Lordinana

	Dain Rage
	Examples:
	- A sent and a Color of the sent A sent A
Ĩ.	Mechanical Weathering:
a.	Expoliation:
	Takes place at the places where the
	temp during the day is extremely high
Alibap	& temp. tempduring the night is extremely low
	Rocks are bad conductors of hear.
	Hence whatever heat is there during the
	day, it is confined to move to the toplouter
	most layer of the rock; the inde part of
	the rock remains uneffected
	As a result the rock would expand during
	the day (however, only a bit).
	At night, the heat is lost very quickly from
	the outer surface which results in contra-
	ction of the rock.
	Due to the expansion during the day &
-	contraction during the night, after a long
	time, a tension is built up & the top surface!
-	skin which was exposed, sheds off.
	This process is called Expliation.
	expansion * 5*
	A CONTRACTOR
_	
	Example: at Raiasthan.



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			E
	b.	Frost weathering/fre	eze Thaw:
		Occurs at places where	
		below o'c & day temp. i	9
		the type of weathering p	
	ulpi34	but high altitudes.	la seast mates -
		some rocks have crack	s in them which are
		filled up by water. when the water freezes	to ice the crack
		espands due to the an	
		of water	omito chiuff b
		During the day, when th	e ice melts. & the
		crack deepens.	int beautyman
	100	After a long time, the ro	cic shatters.
		high altitude	he funcing theor
_			Break down of
		mandle of in the	Poucs:
		Had ut// null Hann	- Fiwater
		124	/ / crack
4		:09/	expands. as water freezes
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4			->screetalus.
-		Escample - Kashmir.	
		ופרניו → ומשקבלין בלנכנים-	Lapes ith nov x
			confictores.
			- 16/12 : p3 -
		by made up of clayic	ווסמל ניגול וו
		(posts bitingma)	



	Data
C-	Pressure Release:
	when lower layers of any rock are
ti fa	subjected to pressure by their upper
eshusive	layers, they get compact suddenly
	when these above lying layers are completely
1/0-1	removed, due to pressure release, parallel
	cracks would be formed & finally the
3.5	sock would break.
miss	ages duratemania of the sude changes
d.	Hydration.
	Occurs in rocks which are made up
	structured layers of clay. water moterates
	when these rocks get wet, water gets
	between these layers
,	
	The vander was forces of the layers of
	clay breaks permantly leven if the water
	dsies)
	The clay loosens.
	clay layers
*	Van der waal forces -> largely electro-
	static forces.
	Eg: Shale -
	(rock entirely made up of clayie
	it is like compacted clay)



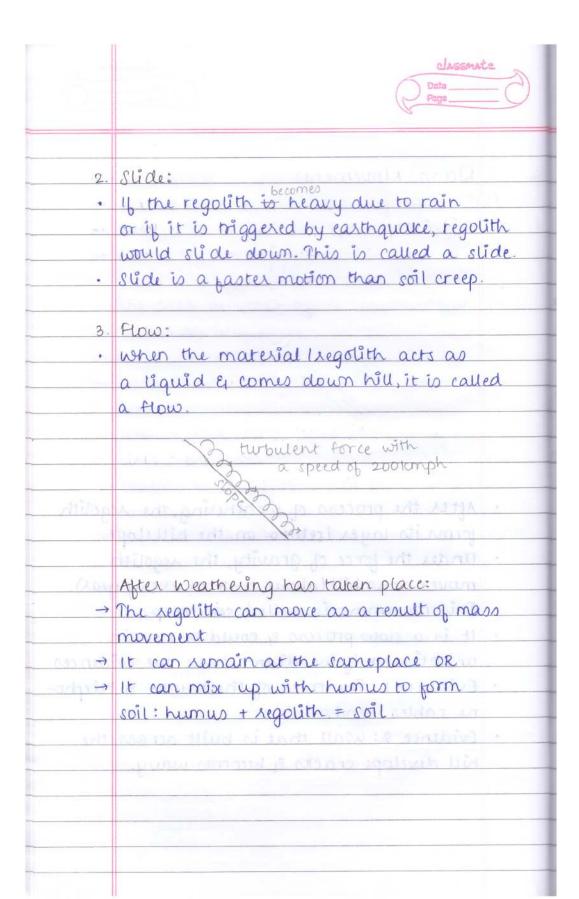
	Clasemate Date
2	Chemical weathering:
- (2	- Creme when a rack contains suring
а	Solution:
•	occurs in rocks which contain minerals
	like halite (compacted Naci) & Grypson (comp
	acted (as04) 3 the simoned 1130x 1417 -
•	Du to running water or rain, one or more
	of these minerals could be removed.
	and the second s
	A rock ining .
	BABA ALANULAL - ABA OG
	ACROSS disintegration BB O
	CBC CAMILED CO
	ents left rock.
miller	The regolith is not same as the regolith
	Eg: Granite-contains minerals: such
	→ Quartz - physically & chemicaly strong
	-> Feldspar-physically weate; chemically weak
	→ Mica-physically weak; chemically strong
	when subjected to weathering, Feldspar
	would break up into 120, Al203 & 65i02
	· · · · · · · · · · · · · · · · · · ·
	Bausite I formed in tropical
	regions)
	Stephin Co. But 100



	Data
b.	Oxidation
	occurs when a rock containg pyrite (Fes),
	Curs, Pbs or 201 is exposed to oxygen
	Fes + 02> Fe203
	Thinguis a (Day Pust and Andrews 1)
•	The rock becomes soft & can be easily
·	broken by any forces.
	Carbonation
C.	Rain:
*	H20 + $CO_2 \rightarrow H_2CO_3$
	Limestone:
***************************************	$H2CO3 + CaCO3 \longrightarrow Ca(OH)2$
	contained in timestant
•//	Limestone is compact but due to carbonation
	it becomes loose.
0.1	or duality splanifically & chemicaly rec
101*	carbonation causes - stalagtites &
pnon	stalagnites
-	Under ground caves.
4	District of the state of the state of the state
	H2 C03
	Unistane H2 CO3 seeps between boundly of sandstone
	(smiles) (a limestone because it canno dissolve sandstone.
~	sandstone-
	made up of quartz ophysically of chemically strong



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	Mass Movement:
	The regolith is beaugiful to rain
	Sail Creep: Man hamman at the
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	gen lin not mit to the up to in in it.
	237/
1	co the Milesality and attention
T by	Hon of the Willes of Commences In Europe Commences
	20014
	gravity
	After the process of weathering, the regolith
	forms its layer I settles on the hillslope.
	under the force of gravity, the regolith
	moves downhill (about 2-3 cm every year).
	This movement is called soil creep.
*	It is a slow process & could be remain
	Evidence 1: The trees of the trunks & telepho-
	ne cables bend.
	Evidence 2: Wall that is built across the
	till develops cracks & becomes wary.
	y.



	Classmate Date
-	RIVER PROCESSES
	- Joines of courts in the Avent
-	/11non \$ 2-25-
	Regolith \Regolith
	Parent Rock - Parent Rock - Parent Rock
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	- Roinwites:
-00	The soil Profile.
	allia ampatati ette a ett patagore
Lex	Top soil Sub soil → leachny of nutrien prom surface by Weathered Rock; water.
	Parent Rock Inno 12
	wind it made at them channed toward to
	- Chromes-
	The first males cheans met to some the
	m nieva daidi mandi saka harri
- Off	or promoved Alberthald 14t may the