Chapter 11: Rocks

Name:		Block:
Rocks vs. Minerals	2	compaction cementation sediments weathering
A rock can be made of one or more		erosion
originate from(un	like a mineral).	
Compositions are listed on pg of the refe	rence table	*eatherno
1.)Monomineralic rocks: made ofmineral, usua	rence table ally from	Heathering & erdelon
or	S	
Examples:	Igneou	heat & pressure Metamorphi
(mineral	_)	Coling method
(mineral)		magma
2.)Polymineralic rocks:	minerals	
Ex:mixture of quartz, feldspar	, micas, amphibole	
3.) Biologic origin: Coal-		
How are Rocks Classified?		
► Three groups <u>according to how they formed</u>		
► 1.)Igneous		
2.)Metamorphic		
➤ 3.)Sedimentary		
Rocks are further classified according to :		
(1)	(2)	
SEDIMENTARY ROCKS		
Always involve to form. Bec	ause they involve water,	they are only found in the
of the earth's crust (a thin "		
How do sedimentary rocks form according to pg. 6 of the	e ESRT?	
1		

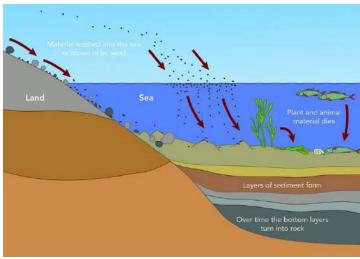
2.

Clastic rock environment of formation→









		turn into rock
Sedimentary Rock Types (Texture)		
1.)Clastic (fragmental) Sedimentary Rocks:		
sediments in order of decreasing grain size:		
Cements: dissolved minerals	out in the saturated water of po	re spaces in sediment
layers forming the ""		
➤ Common cements in rock:		
2.) Crystalline Sedimentary Rocks: Are made of mineral cry		
Example 1: Evaporation of leaves crystals)	behind (hali	te
Example 2: Seawater becomes supersaturated withseashells of marine organisms, dropping mineral deposits of!	(C	aCO3) which comes from cean floor
3.) Bioclastic Sedimentary Rocks:		
Example 1: and	from dying	
organisms deposit on the ocean floor. Over time they will ot form(coquina version)	compact and cement together	
Example 2: dead remains from ma	arshy areas compact to form	heat and pressure
Sedimentary rocks are the only types of rocks whith	ich contain	



Which type of sedimentary rock do you think would preserve the imprint of an animal bone and/or leaf? _____

IGNEOUS ROCKS (cooling and solidication of molten rock)	Extrusive Igneous
	th and lava Rocks
Igneous rocks are classified according to	mber
1.) Extrusive-	laccolith
2.) Intrusive- Intrusive Igneous Rocks	dike
Igneous rocks are further classified according to	Xenolith
► Intrusive rocks- cool, thus will have grains or	
Examples:	
Extrusive rocks- cool, thus will have grains or, and in some cases no crystals at all (non crystalline=) Examples:	
Vesicular texture: When molten rock contains volatiles (<u>) trapped inside</u>
 When the gas releases,features are recorded in the rock 	
Examples:	100
Igneous rocks are also classified by composition	+-2 cm-+
 (1) Felsic- are rocks rich in and minerals like and in color (pink, white, clear, light grey) Examples:	and
• (2) Mafic- are rocks rich in and minerals like pyroxene, oliving & hornblende and are in color (black, green, dark grey) Examples:	e, Gabbro
If a rock has roughly the same amount of felsic and mafic minerals it is	_ Examples:

Metamorphic Rocks (by heat and/or pressure)

Any existing rock ca	n be metamorphosed with	in	and/or	
ex: Limestone → Ma	<u>rble</u>			
The "parent rock" b	ecomes			
•	the size of crystals/grains	-000		
and/or	minerals form		metamorph	ism (111)
re:		granite		
	Have "laye	(nonfoliated ers" of) [
crystals formed by r	ecrystallization where minerals ali		λ	gneiss (foliated)
Examples:				(journeu)
	Minerals ar	e	because th	ey were not
subject to high direc	ctional pressure			
Examples:				
	Foliation:			
wo types of Metamorp contact with magma With this	hism: : rocks come into a/lava of an intrusion/extrusion , rocks	C Shale	ontact Metar	
wo types of Metamorp contact with magma With this metamorph	ohism:: rocks come into a/lava of an intrusion/extrusion, rocks	Shale Shale Limestone Quartz Sandst Shale	ontact Metar	Marble Quartzite Hornfels
wo types of Metamory contact with magma With this metamorph *These rock	chism: : rocks come into a/lava of an intrusion/extrusion, rocks ose s show	Shale Shale Limestone Quartz Sandst Shale	ontact Metar	Marble —Quartzite —Hornfels
wo types of Metamory contact with magma With this metamorph *These rock there is no o	: rocks come into a/lava of an intrusion/extrusion , rocks ose s show directional pressure	Shale Slate Shale Limestone Quartz Sandst Shale as Low T Low P	ontact Metarone Magina Region metamorp	Marble —Quartzite —Hornfels
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