

Lab 10 - Rock - KEY

1. Phaneritic texture = gabbro, diorite, granite
Porphyritic texture = basalt, andesite, rhyolite
2. Phaneritic texture means slow cooled magma below the surface
Porphyritic and glassy textures means fast cooled lava at the surface
3. obsidian cools at the earth's surface
4. no, cooled too fast to have minerals
5. dark color = basalt, gabbro
medium color = andesite, diorite
light color = rhyolite, granite
(obsidian can be dark, medium and/or light)
6. Gabbro has ferromagnesian silicates; Granite has nonferromagnesian silicates
7. basalt and gabbro - augite and Ca plagioclase
diorite and andesite - hornblende and Ca, Na plagioclase
rhyolite and granite - biotite, orthoclase, Na plagioclase, muscovite, quartz
8. ultramafic - rare, none in the box
mafic - basalt and gabbro
intermediate - diorite and andesite
felsic - rhyolite and granite
9. gentle = basalt; violent = rhyolite; andesite can be either gentle or violent
10. granite because Na, Al and K are light metals in nonferromagnesian silicates
11. detrital = shale and sandstone
chemical = limestone and coal
12. sandstone is medium-grained; shale is fine-grained
13. sandstone = quartz; shale = clay
14. both sandstone and shale are well-sorted
15. sandstone = beach; shale = swamp
16. the red color is hematite which is cementing the rock

17. Limestone = hardparts of animals; Coal = hardparts of plants
18. Coal is made up of organic carbon
19. Foliated texture = schist and gneiss
Nonfoliated texture = marble and quartzite
20. schist = muscovite, biotite, quartz
gneiss = biotite, orthoclase, Na plagioclase, muscovite, quartz
marble = calcite
quartzite = quartz
21. shale ---> schist
granite ---> gneiss
limestone ---> marble
sandstone ---> quartzite