

HIGHER SECONDARY
PRACTICAL STUDY MATERIAL
GEOLOGY

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PETROLOGY

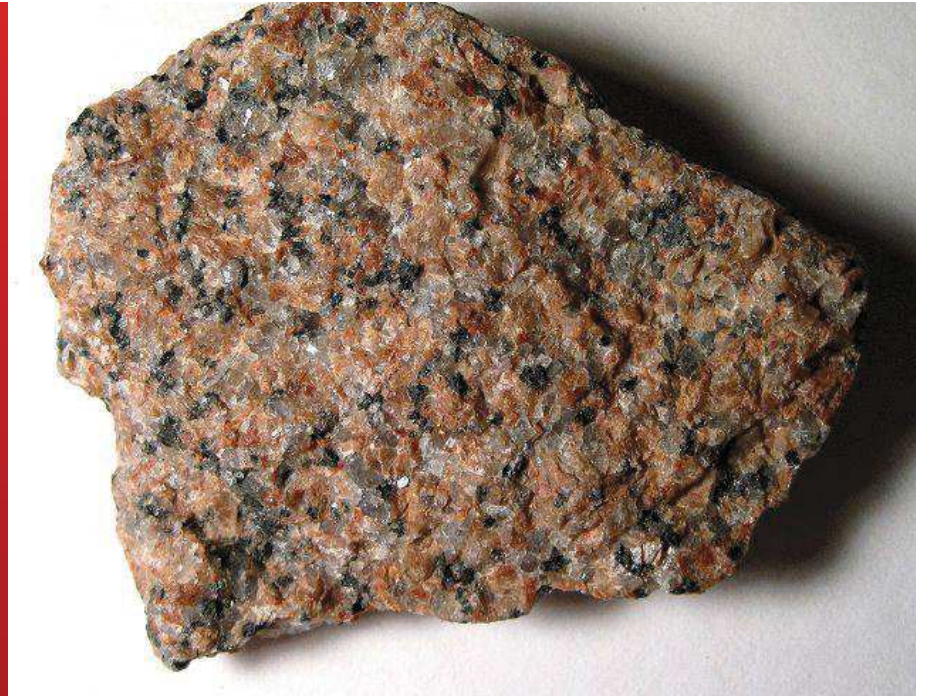
- **IGNEOUS ROCKS**
- **SEDIMENTARY ROCKS**
- **METAMORPHIC ROCKS**

The background is a solid red color with a pattern of faint, overlapping leaf silhouettes in a lighter shade of red. White, thin-lined rectangular outlines are scattered across the page, some enclosing the leaf patterns and others floating independently. The overall aesthetic is clean and modern.

● IGNEOUS ROCKS

SPECIMEN NO:1

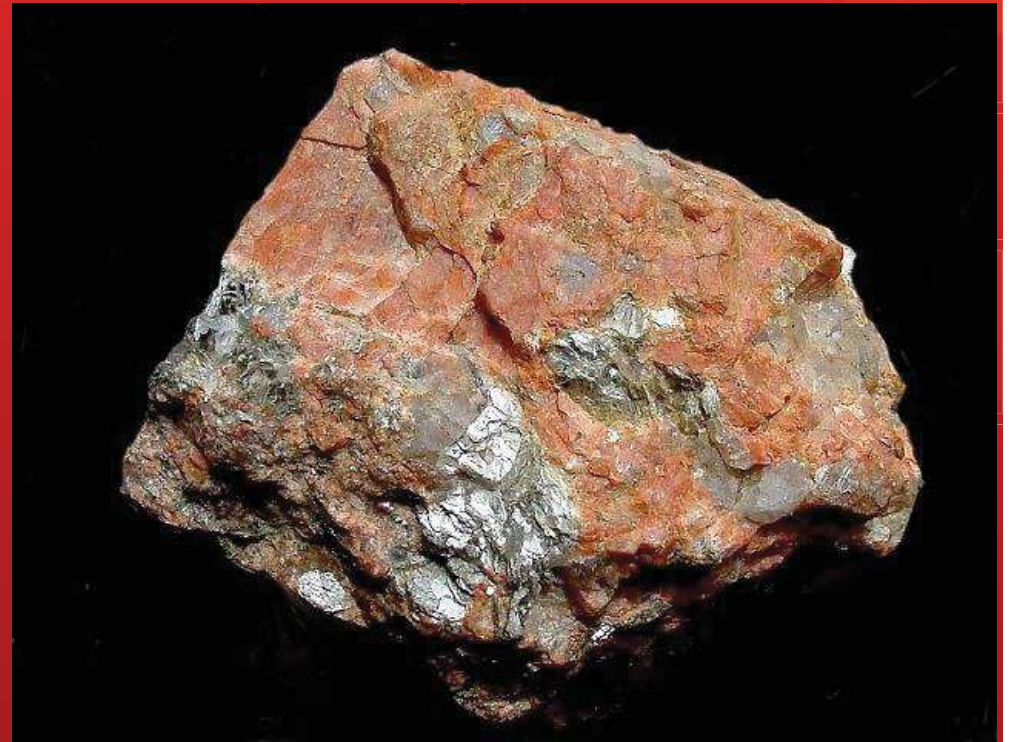
GRANITE



TEXTURE	Coarse grained , holocrystalline , phaneritic, equigranular/ porphyritic
MINERALOGY	
Major minerals	:Quartz, Feldspar
Minor minerals :	:Biotite , Hornblende
TYPE	Felsic plutonic igneous rock
This rock is identified as GRANITE	

SPECIMEN NO:2

PEGMATITE



TEXTURE	Holocrystalline phaneritic very coarse grained pegmatitic Equigranular
MINERALOGY	
Major minerals	: Quartz, Feldspar
Minor minerals	: Biotite, Muscovite
TYPE	Felsic plutonic igneous rock
This rock is identified as PEGMATITE	

SPECIMEN NO:3

BASALT



TEXTURE	Holohyaline Aphanitic, Fine grained, Equigranular
MINERALOGY	
Major minerals	: Feldspar, Ca Plagioclase and Pyroxene
Minor minerals	: Olivine
TYPE	Mafic volcanic igneous rock
This rock is identified as BASALT	

The background is a solid red color. It features a decorative pattern of white outlines. On the left and right sides, there are vertical columns of overlapping squares. Interspersed among these squares are various leaf shapes, including simple ovals and more complex, multi-lobed leaves. The overall effect is a stylized, geometric pattern.

○ **SEDIMENTARY ROCKS**

SPECIMEN NO:4

SANDSTONE



TEXTURE /STRUCTURE	Clastic, rounded and coarse grained
MINERALOGY	
Major minerals	: Quartz
Minor minerals	: Feldspar, Garnet
TYPE	Clastic sedimentary rock
This rock is identified as SANDSTONE	

SPECIMEN NO:5

LATERITE



TEXTURE /STRUCTURE	Reddish porous Oolitic
MINERALOGY	
Major minerals	: Limonite
Minor minerals	: Quartz
TYPE	Residual sedimentary rock
This rock is identified as LATERITE	

SPECIMEN NO:6

SHALE



TEXTURE /STRUCTURE	Clastic fine grained, lamination present
MINERALOGY	
Major minerals	: Clay sized particles, < 1/256 mm
Minor minerals	: Fine matrix
TYPE	Clastic sedimentary rock
This rock is identified as SHALE	



- **METAMORPHIC ROCKS**

SPECIMEN NO:7

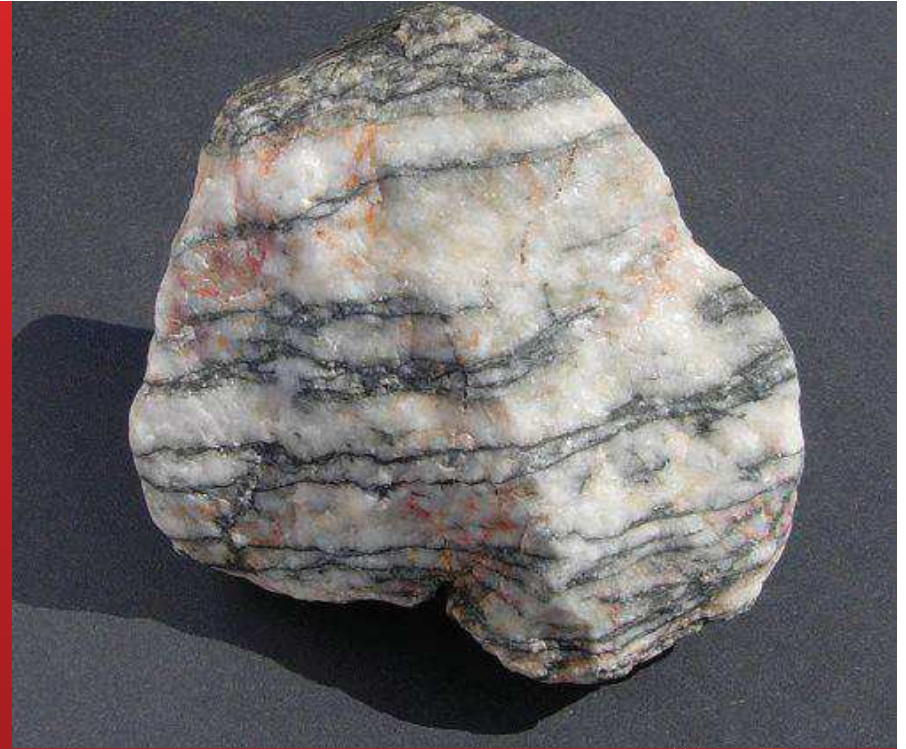
CHLORITE SCHIST



TEXTURE /STRUCTURE	Medium to coarse Grained
MINERALOGY	
Major minerals	: chlorite
Minor minerals	:Quartz, Garnet
TYPE	Foliated metamorphic rocks
This rock is identified as CHLORITE SCHIST	

SPECIMEN NO:8

GNEISS



TEXTURE /STRUCTURE	Alternating layers of light (felsic) and dark (mafic) minerals Medium to coarse grained
MINERALOGY	
Major minerals	: Feldspar, Quartz
Minor minerals	:Hornblende, Garnet
TYPE	Foliated metamorphic rocks
This rock is identified as GNEISS	

SPECIMEN NO:9

SLATE



TEXTURE /STRUCTURE	Fine grained, minerals not visible
MINERALOGY	
Major minerals	:Very fine grained ,no visible minerals . Minerals with basal cleavage: commonly mica , graphite, etc
Minor minerals	:Very fine grained, no visible minerals
TYPE	Foliated metamorphic rocks
This rock is identified as SLATE	

SPECIMEN NO:10

QUARTZITE



TEXTURE /STRUCTURE	Granular ,Medium to coarse grained and non oriented grains
MINERALOGY	
Major minerals	:Quartz
Minor minerals	:Feldspar
TYPE	Non Foliated metamorphic rocks
This rock is identified as QUARTZITE	