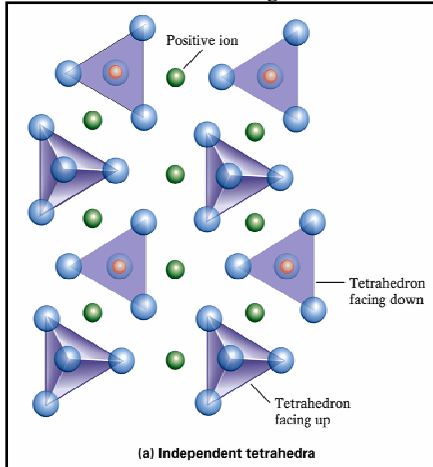


Olivine $(\text{Mg,Fe})_2\text{SiO}_4$

Cleavage: None

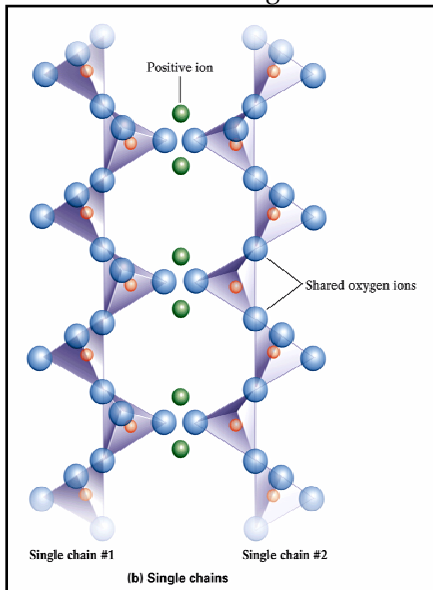
Silicate Structure: Single Tetrahedron



Pyroxene family: Augite $\text{Ca}(\text{Mg,Fe,Al})(\text{Al,Si})\text{O}_6$

Cleavage: Two planes at right angles

Silicate Structure: Single Chains

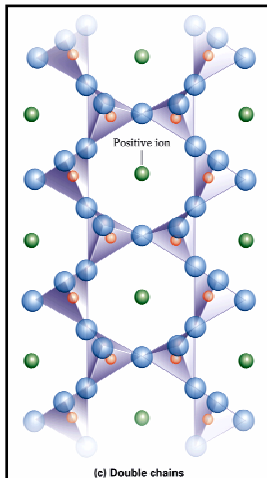


Amphibole family: Hornblende

$(\text{Ca,Na})_{2-3}(\text{Fe,Mg,Al})_5\text{Si}_6(\text{Si,Al})_2\text{O}_{22}(\text{OH})_2$

Cleavage: Two planes at 60° and 120°

Silicate Structure: Double Chains

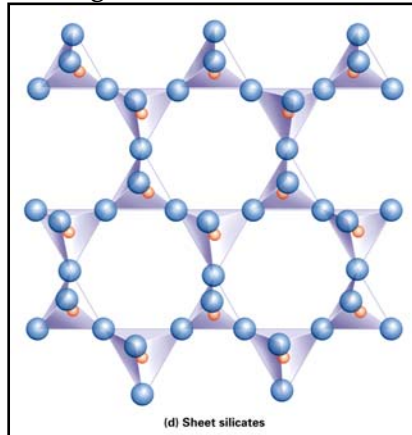


Mica family:

Biotite $\text{K}(\text{Mg,Fe})_3\text{AlSi}_3\text{O}_{10}(\text{OH})_2$

Muscovite $\text{KAl}_3\text{Si}_3\text{O}_{10}(\text{OH})_2$

Cleavage: Sheets **Silicate Structure:** Sheets

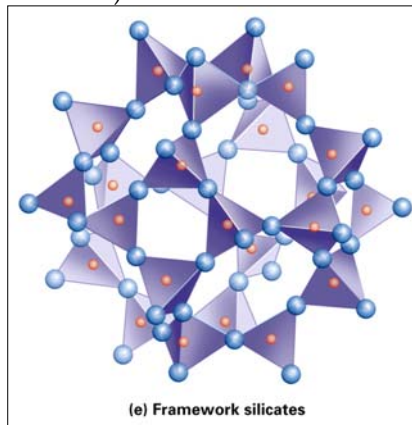


Feldspar family:

$\text{CaAl}_2\text{Si}_2\text{O}_8$ AND $\text{NaAlSi}_3\text{O}_8$ AND KAlSi_3O_8

Cleavage: Two planes at right angles

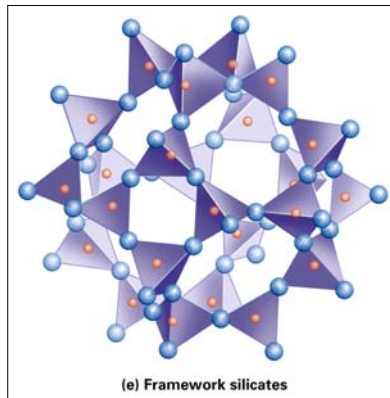
Silicate Structure: Three Dimensional Network with Aluminum tetrahedron substituting for Silicon tetrahedron in 25-50% of the sites (leaves excess charges that require ionic bonding with other cations within the structure).



Quartz SiO_2

Cleavage: None

Silicate Structure: Three Dimensional Network



Graphics from Chernicoff/Whitney, Geology