



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Hydrothermal metamorphism of mantle rock under a seafloor spreading center
Description:	Weakly foliated. Mottled green color -- Smooth, slick sides -- Looks like squished watermelon seeds -- Green, mottled, massive. Smooth, rounded slippery surfaces. Can be black or reddish. Usually displays slickensides
Name:	Serpentine
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Low grade metamorphism of basalt/gabbro during burial, subduction, or continental collision zones.
Description:	Weakly foliated. Very fine grained (too small to see crystals); light to yellow green (from chlorite, epidote, and/or actinolite).
Name:	Greenstone
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Medium grade metamorphism of basalt/gabbro during burial or continental collision zones.
Description:	Foliation: Schistose. Contains green minerals (actinolite + epidote + albite +/- chlorite +/- quartz) giving it a green appearance. Formed through medium grade burial of basalt/gabbro.
Name:	Greenschist
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Medium grade metamorphism of basalt/gabbro in subduction zone.
Description:	Weakly foliated. Contain a blue amphibole (glaucofane) + blue silicate similar to epidote (lawsonite) or epidote. Formed through medium grade subduction of basalt/gabbro.
Name:	Blueschist
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	High grade metamorphism of basalt/gabbro in subduction zone.
Description:	Weakly foiated. Red garnets scattered uniformly throughout a finer-grained green groundmass (bright-green pyroxene: omphacite). May have quartz, kyanite, or biotite.
Name:	Eclogite
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Low grade metamorphism of mudstone in burial, subduction, or convergent boundary metamorphism.
Description:	Foliation: slaty cleavage. Dull; similar to shale, but more dense and breaks into hard flat sheets. No visible crystals.
Name:	Slate
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Low-medium grade metamorphism of mudstone in burial, subduction, or convergent boundary metamorphism.
Description:	Foliation: phyllitic texture. Similar to slate, but sheets are undulating (wrinkled). Luster is more silky or satiny than slate. Some isolated crystals might be visible.
Name:	Phyllite
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Medium grade metamorphism of mudstone in burial, subduction, or convergent boundary metamorphism.
Description:	Schistose foliation: crystals easily visible throughout rock - usually all micas, giving it a scaly look. Foliation greater than phyllite. Minerals can be garnet + biotite + chlorite + muscovite + quartz + plagioclase + epidote + kyanite. Chlorite disappears and kyanite appears as grade increases.
Name:	Schist
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	High grade metamorphism of mudstone or granite in burial, subduction, or convergent boundary metamorphism.
Description:	Gneissic foliation: grains medium to coarse; light and dark minerals segregated into bands. Gneissic texture.
Name:	Gneiss
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	High grade metamorphism of mudstone or granite in burial, subduction, or convergent boundary metamorphism.
Description:	Highly foliated; grains medium to coarse; light and dark minerals segregated into bands. Gneissic texture.
Name:	Gneiss
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Very high grade metamorphism of mudstone or granite, with partial melting, in burial, subduction, or convergent boundary metamorphism.
Description:	Highly foliated, contorted layers: gneissic texture that has been folded: some of the layers/bands have melted and crystallized as granite.
Name:	Migmatite
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Metamorphism of quartz sandstone or chert or diatomite in any type of setting at any grade
Description:	Nonfoliated, sugary, sandy, or crystalline; can sometimes see quartz sand grains fused together; grains won't rub off like sandstone.
Name:	Quartzite
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Metamorphism of chalk, calcarenite, coquina or limestone in any type of setting at any grade
Description:	Nonfoliated, sugary, sandy, or crystalline; calcite or dolomite (form of calcite with Mg) crystals fused together. White to pink. Might have dark streaks.
Name:	Marble
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Contact metamorphism of mudstone or basalt. (Basalt in this case.)
Description:	Nonfoliated, sugary or microcrystalline, usually dark-colored. *Since clearly formerly basalt, grade must be high.
Name:	Hornfels
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Contact metamorphism of sandstone or other rock with mixed minerals. (This sample is high grade due to large crystal size and presence of garnet).
Description:	Nonfoliated. Crystalline; usually with large crystals, including calcite, quartz, garnet, epidote, pyroxene and other crystals, like sulfides. (This sample contains wollastonite, calcite, and garnet.)
Name:	Skarn
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Contact metamorphism of sandstone or other rock with mixed minerals. (This sample is high grade due to large crystal size and presence of garnet).
Description:	Nonfoliated. Crystalline; usually with large crystals, including calcite, quartz, garnet, epidote, pyroxene and other crystals, like sulfides. (This sample contains rhodochrosite, quartz, calcite, and garnet.)
Name:	Skarn
Source of picture	K. Wiese



Rock type:	Mineral found in metamorphic rock
Formation Environment:	Contact metamorphism of sandstone or other rock with mixed minerals. (This sample is high grade due to large crystal size and presence of garnet).
Description:	Nonfoliated. Crystalline; usually with large crystals, including calcite, quartz, garnet, epidote, pyroxene and other crystals, like sulfides. (This sample contains epidote, quartz, calcite, and garnet.)
Name:	Skarn
Source of picture	K. Wiese