

Geological process	resource		Use
Weathering(breaks)	Soil	clay(Na, K and Ca ions)	Industry of ceramics, bricks, paint and paper.
			Rich soil→growing crops
		Bauxite(Al-SiOH)	Cans, airplanes, cars
		Laterite(Fe-OH)	Building industry
Erosion(transports)	Placer deposits: Au, Ti , tin		airplanes
	Sand and gravel silt and clay		Building industry
Biogenic	Coal		Heating
	Natural gas		cooking
	chalk		Chalk board
	limestone		cement
Sedimentation	Sand stone (sand +cement)		Recovery of Si
Marine	Hurricane activities: Titanium placer deposit		Airplane bodies
	Coral reefs		jewelry
	→limestone carbonate rocks		Building industry, smelting of iron
Magmatic: Igneous intrusion	Hydrothermal vein deposits : Cu,Au,Ag,Zn,Pb <b>Abd and scarce metals</b> At margin of intrusions: pegmatite (diamond,emerald and aquamarine)		Jewelry artifact
Contact metamorphic	Skarn deposits :iron oxide and sulfides of lead Cu,Au, Ag Other:gemstones,emeralds,corundum that form in vein structures. <b>Abd and scarce metals</b>		Production of steel
Metamorphic	<u>Rocks:</u> Granite->gneiss Limestone->marble Sandstone->quartzite		Building industry
	<u>Minerals:</u> Corundum		Abrasives
	Garnet		Semi-precious→jewelry
	Kyanite(Al <sub>2</sub> SiO <sub>5</sub> )		Ceramics preparation
evaporative	halite		Food industry/spas
	Gypsum/anhydride		Building industry
	Potassium, magnesium or calcium		Beverage cans/fertilizers
	Volcanic region: sodium sulfate		

Fractional crystallization	Olivine(below) starts first to form then pyroxenes then plagioclase feldspars then the coarse grained rocks rich in iron and magnesium but poor in silica	Olivine is used as refractory bricks
	Obsidian (no metals in it) natural glass	artifacts
Volcanogenic	Basalt(surface) and silica-poor rocks:	Paving street