|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Hardness** | **Grain Size** | **Composition** | **Other** | **Rock Type** |
| **hard** | **mixed** | **mixed rocks and sediment** | **round rocks in sediment matrix** | [**Conglomerate**](http://geology.about.com/library/bl/images/blconglomerate.htm) |
| **hard or soft** | **mixed** | **mixed rocks and sediment** | **sharp pieces of same material as groundmass** | [**Breccia**](http://geology.about.com/library/bl/images/blbreccia.htm) |
| **hard** | **coarse** | **clean**[**quartz**](http://geology.about.com/library/bl/images/blquartz.htm) | **white to brown** | [**Sandstone**](http://geology.about.com/library/bl/images/blsandstone.htm) |
| **hard** | **coarse** | **clean quartz and**[**feldspar**](http://geology.about.com/library/bl/images/blmicrocline.htm) | **usually very coarse** | **Arkose** |
| **hard** | **mixed** | **mixed sediment with rock grains and clay** | **gray or dark and "dirty"** | [**Wacke/ Graywacke**](http://geology.about.com/library/bl/images/blgraywacke.htm) |
| **hard** | **fine** | **very fine sand; no clay** | **feels gritty on teeth** | [**Siltstone**](http://geology.about.com/library/bl/images/blsiltstone.htm) |
| **hard** | **fine** | [**chalcedony**](http://geology.about.com/library/bl/images/blchalcedony.htm) | **no fizzing with acid** | [**Chert**](http://geology.about.com/library/bl/images/blchert.htm) |
| **soft** | **fine** | **clay minerals** | **foliated** | [**Shale**](http://geology.about.com/library/bl/images/blshale.htm) |
| **soft** | **fine** | **carbon** | **black; burns with tarry smoke** | [**Coal**](http://geology.about.com/library/bl/images/blcoal.htm) |
| **soft** | **fine** | [**calcite**](http://geology.about.com/library/bl/images/blcalcite.htm) | **fizzes with acid** | [**Limestone**](http://geology.about.com/library/bl/images/bllimestone.htm) |
| **soft** | **coarse or fine** | **dolomite (magnesian calcite)** | **no fizzing with acid unless powdered** | **Dolomite or Dolostone** |
| **soft** | **coarse** | **fossil shells** | **mostly pieces** | [**Coquina**](http://geology.about.com/library/bl/images/blcoquina.htm) |
| **very soft** | **coarse** | [**halite**](http://geology.about.com/library/bl/images/blhalite.htm) | **salt taste** | [**Rock Salt**](http://geology.about.com/library/bl/images/blhalite.htm) |
| **very soft** | **coarse** | [**gypsum**](http://geology.about.com/library/bl/images/bldesertrose.htm) | **white or pink** | **Gypsum** |

**Sedimentary Rocks**

**Igneous Rocks**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Grain Size** | **Color** | **Other** | **Composition** | **Rock Type** |
| **fine** | **dark** | **glassy texture** | **lava glass, usually felsic** | [**Obsidian**](http://geology.about.com/library/bl/images/blobsidian.htm) |
| **fine** | **light** | **fine frothy texture** | **lava froth, felsic** | [**Pumice**](http://geology.about.com/library/bl/images/blpumice.htm) |
| **fine** | **dark** | **coarse frothy texture** | **lava froth, basaltic** | [**Scoria**](http://geology.about.com/library/bl/images/blscoria.htm) |
| **fine** | **light** | **contains**[**quartz**](http://geology.about.com/library/bl/images/blquartz.htm) | **high-silica (felsic) lava** | [**Felsite**](http://geology.about.com/library/bl/images/blfelsite.htm) |
| **fine** | **medium** | **between felsite and basalt** | **medium-silica lava** | **Andesite** |
| **fine** | **dark** | **has no quartz** | **low-silica (mafic) lava** | [**Basalt**](http://geology.about.com/library/bl/images/blbasalt.htm) |
| **mixed** | **any color** | **fine groundmass with larger grains (phenocrysts)** | **feldspar,**[**quartz**](http://geology.about.com/library/bl/images/blquartz.htm)**, pyroxene or**[**olivine**](http://geology.about.com/library/bl/images/blolivine.htm)**phenocrysts** | [**Porphyry**](http://geology.about.com/library/bl/images/blporphyry.htm) |
| **coarse** | **light** | **wide range of color and grain size** | **feldspar and quartz with minor mica, amphibole or pyroxene; felsic** | [**Granite**](http://geology.about.com/library/bl/images/blgranite.htm) |
| **coarse** | **light** | **like granite but without quartz** | **feldspar with minor mica, amphibole or pyroxene; felsic** | **Syenite** |
| **coarse** | **medium to dark** | **little or no quartz** | **feldspar and dark minerals; mafic** | [**Diorite**](http://geology.about.com/library/bl/images/bldiorite.htm) |
| **coarse** | **medium to dark** | **no quartz; may have**[**olivine**](http://geology.about.com/library/bl/images/blolivine.htm) | **feldspar and dark minerals; mafic** | [**Gabbro**](http://geology.about.com/library/bl/images/blgabbro.htm) |
| **coarse** | **dark** | **dense; always has**[**olivine**](http://geology.about.com/library/bl/images/blolivine.htm) | **dark minerals, pyroxene and olivine; ultramafic** | **Peridotite** |
| **coarse** | **dark** | **dense** | **pyroxene; ultramafic** | **Pyroxenite** |
| **coarse** | **green** | **dense** | **olivine; ultramafic** | **Dunite** |

**Metamorphic Rocks**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Foliation** | **Grain Size** | **Hardness** | **Color** | **Other** | **Rock Type** |
| **foliated** | **fine** | **soft** | **dark** | **"tink" when struck** | [**Slate**](http://geology.about.com/library/bl/images/blslate.htm) |
| **foliated** | **fine** | **soft** | **dark** | **shiny; crinkly foliation** | [**Phyllite**](http://geology.about.com/library/bl/images/blphyllite.htm) |
| **foliated** | **coarse** | **hard** | **mixed "salt & pepper"** | **often has large crystals** | [**Schist**](http://geology.about.com/library/bl/images/blschist.htm) |
| **foliated** | **coarse** | **hard** | **mixed** | **banded** | [**Gneiss**](http://geology.about.com/library/bl/images/blgneiss.htm) |
| **foliated** | **coarse** | **hard** | **mixed** | **distorted "melted" layers** | [**Migmatite**](http://geology.about.com/library/bl/images/blmigmatite.htm) |
| **foliated** | **coarse** | **hard** | **dark** | **mostly hornblende** | [**Amphibolite**](http://geology.about.com/library/bl/images/blamphibolite.htm) |
| **nonfoliated** | **coarse** | **hard** | **red and green** | **dense; garnet and pyroxene** | [**Eclogite**](http://geology.about.com/library/bl/images/bleclogite.htm) |
| **nonfoliated** | **coarse** | **soft** | **light** | **fizzes with acid (**[**calcite**](http://geology.about.com/library/bl/images/blcalcite.htm)**)** | [**Marble**](http://geology.about.com/library/bl/images/blmarble.htm) |
| **nonfoliated** | **coarse** | **hard** | **light** | **no fizzing with acid (**[**quartz**](http://geology.about.com/library/bl/images/blquartz.htm)**)** | [**Quartzite**](http://geology.about.com/library/bl/images/blquartzite.htm) |
| **nonfoliated** | **coarse or fine** | **hard** | **dark** | **dull and opaque colors** | **Hornfels** |