

Mystery Tumbled Stone Identification Guide

Images and descriptions from geology.com and rocktumbler.com

ROCK OR MINERAL NAME	TYPE	FUN FACT(S)
AGATE	Mineral	Agate is a translucent variety of microcrystalline quartz. It is used as a semiprecious stone when it is of desirable quality and color. Agate generally forms by the deposition of silica from groundwater in the cavities of igneous rocks. The agate deposits in concentric layers around the walls of the cavity, or in horizontal layers building up from the bottom of the cavity. These structures produce the banded patterns that are characteristic of many agates.
AMAZONITE	Mineral	Amazonite, or Amazon stone, is a trade name given to a light green, bright green, or blue-green variety of microcline feldspar. Most specimens are translucent. Because there are very few blue or green gemstones, Amazonite's color attracts almost immediate popularity.
DUMORTIERITE	Mineral	Dumortierite is a dark blue to dark greenish-blue silicate mineral with a chemical composition of $Al_7BO_3(SiO_4)_3O_3$ found in metamorphic rocks. It is typically opaque and when attractive can be used to produce cabochons, beads and tumbled stones.
GRANITE	Igneous Rock	Granite is a light-colored igneous rock with grains large enough to be visible with the unaided eye. It forms from the slow crystallization of magma below Earth's surface. Granite is composed mainly of quartz and feldspar with minor amounts of mica, amphiboles, and other minerals. This mineral composition usually gives granite a red, pink, gray, or white color with dark mineral grains visible throughout the rock.
GRANITE, BLUE	Igneous Rock	"K2 Granite," also known as "K2 Jasper" and "raindrop azurite," is an extremely interesting rock and lapidary material from the Skardu area of northern Pakistan. It is like an eye magnet for anyone who sees it for the first time. It is a bright white granite that contains sharply contrasting orbs of bright blue azurite. The azurite orbs range from a few millimeters up to about two centimeters in diameter. On a broken surface or on the surface of a slab, the blue orbs look like drops of bright blue ink that splashed onto the rock. Upon closer examination, however, you will see that they are actually spherical in shape.
GRANITE, UNAKITE	Igneous Rock	Unakite is the name used for a coarse-grained granitic rock that, after metamorphism, contains abundant pink orthoclase and pistachio-green epidote. These colors have helped it become a popular lapidary material. It is easily cut and polished to produce beads, cabochons, small sculptures, and other ornamental items. It is also a popular material for producing tumbled stones in a rock tumbler. Unakite is attractive, abundant, inexpensive, and frequently seen in the craft jewelry marketplace.
HEMATITE	Mineral	Hematite is one of the most abundant minerals on Earth's surface and in the shallow crust. It is an iron oxide with a chemical composition of Fe_2O_3 . It is a common rock-forming mineral found in sedimentary, metamorphic, and igneous rocks at locations throughout the world.
HOWLITE	Mineral	Howlite is a calcium borosilicate hydroxide mineral that is found in some evaporite deposits. It usually occurs within layers of gypsum as irregularly-shaped nodules that resemble small heads of cauliflower. These nodules are usually white in color with gray to black veins. They often resemble turquoise - but with a white color.
HOWLITE, TURQUENITE	Mineral	Howlite that has been skillfully dyed to colors so similar to turquoise that it fools almost everyone (at least the first time they see it). The gray to black veining aids in the deception.
JADE	Mineral	"Jade" (two different minerals: jadeite and nephrite) is a cultural term used for a very durable material that has been fashioned into tools, sculptures, jewelry, gemstones, and other objects for over 5,000 years. It was first used to manufacture ax heads, weapons, and tools for scraping and hammering because of its toughness.

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JASPER	Mineral	Jasper is an opaque variety of chalcedony that often exhibits interesting patterns and colors caused by impurity inclusions. Jasper differs from agate in that agate is typically translucent and banded, or translucent with visible inclusions that form plume-, moss-, or flame-shaped patterns. Jasper is typically red, brown, orange, yellow, gray, or green and is often associated with iron ores. High-quality specimens of jasper can be polished to a very high luster and are often cut into cabochons or beads for use in jewelry. Jasper is also used to produce tumbled stones and a variety of lapidary products.
JASPER, BRECCIATED	Mineral	The word "breccia" means "rock fragments." Brecciated Jasper is a chalcedony that often forms in a fracture or fault plane. When fault movement occurs the jasper is broken. Then, at a later time, mineral-rich waters flow into the fracture and deposit more chalcedony that re-cements the jasper.
JASPER, DALMATION	Mineral	Dalmatian stone is not a jasper. It is an igneous rock composed of white albite (a feldspar mineral) and black arfvedsonite (a mineral similar to hornblende). Arf! Some specimens might contain similar but closely related feldspar and amphibole minerals.
JASPER, LEOPARD SKIN	Mineral	It looks like the coat of a leopard, complete with the round "rosette" markings that we commonly call "spots." Some specimens have the brown, tan, cream and black color palette that is a close match with the color of many leopards. Others have a red, pink, white and black palette.
JASPER, MOOKAITE	Mineral	Mookaite is an interesting lapidary material mined in Western Australia from a rock unit known as the Windalia Radiolarite. Radiolarites are cherts formed mainly from the thin siliceous shells of tiny marine organisms known as radiolarians. Radiolarians can be so abundant in some parts of the ocean that the seafloor sediments there are composed mainly of radiolarian debris. These lithify by the solution and redeposition of the shell debris in the form of a silica cement.
JASPER, RED	Mineral	Jasper is a semi-translucent to opaque variety of chalcedony that often accepts a very high polish. That is why it is so frequently seen in gemstone and lapidary products. It is also a relatively inexpensive stone, which makes it popular in the marketplace. The material that we have here is brilliant red.
JASPER, WALNUT OR PICTURE	Mineral	"Picture jasper" is a nickname for rocks that consist of chalcedony quartz and have a pattern that looks like landscape scenery. They are found in many parts of the world and have been given a wide variety of names.
OBSIDIAN	Igneous Rock	Obsidian is an igneous rock that forms when molten rock material cools so rapidly that atoms are unable to arrange themselves into a crystalline structure. It is an amorphous material known as a "mineraloid." The result is a volcanic glass with a smooth uniform texture that breaks with a conchoidal fracture (see photo).
OBSIDIAN, SNOWFLAKE	Igneous Rock	As a "glass," obsidian is chemically unstable. With the passage of time, some obsidian begins to crystallize. This process does not happen at a uniform rate throughout the rock. Instead it begins at various locations within the rock. At these locations, the crystallization process forms radial clusters of white or gray cristobalite crystals within the obsidian. When cut and polished, these specimens are referred to as "snowflake obsidian".
QUARTZ	Mineral	Quartz is a chemical compound consisting of one part silicon and two parts oxygen. It is silicon dioxide (SiO ₂). It is the most abundant mineral found at Earth's surface, and its unique properties make it one of the most useful natural substances.
QUARTZ, AMETHYST	Mineral	Amethyst is the purple color variety of quartz. It is the most popular purple gem and one of the most popular gemstones of all time. Amethyst is used to produce faceted stones, cabochons, beads, tumbled stones, and many other items for jewelry and ornamental use.
QUARTZ, AVENTURINE	Mineral	Aventurine is a variety of translucent quartz with abundant small plate- or flake-shaped inclusions. Light entering the quartz strikes these inclusions and reflects from them. This produces a sparkly appearance known as "aventurescence."

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QUARTZ, RED AVENTURINE	Mineral	Aventurine is usually green, but also occurs in orange, yellow, red, pink, brown, white, gray, and blue.
QUARTZ, ROSE	Mineral	Rose quartz is the name used for pink specimens of the mineral quartz. It is abundant, common, and found in large quantities at numerous locations around the world. It usually occurs as massive, anhedral occurrences in hydrothermal veins and pegmatites.
QUARTZ, SMOKY	Mineral	Smoky quartz is a color-variety of crystalline quartz. It ranges from a light yellowish brown to a brown that is so dark that it appears to be black. Less-desirable specimens have a grayish brown color. When cut as a gem, stones with an orangish brown to a reddish brown color are preferred by many people.
QUARTZ, TIGER EYE	Mineral	Tiger's-eye, also called "tiger eye" and "tigers eye," is a very popular gemstone that displays a chatoyancy (cat's-eye) when a polished stone is moved back and forth in incident light. It is a quartz gemstone, usually amber to brown in color, that forms when fibers of the mineral crocidolite are replaced by silica. This structure of parallel fibers is preserved in the stone, and the chatoyant "eye" crosses the parallel fibers at right angles. The best specimens of tiger's-eye are usually cut en cabochon in an orientation that yields the best display of chatoyancy.
SERPENTINE	Metamorphic Rock	Serpentine is not the name of a single mineral. Instead it is a name used for a large group of minerals that fit this generalized formula: $(X)_2-3(Y)_2O_5(OH)_4$. In this formula, X will be one of the following metals: magnesium, iron, nickel, aluminum, zinc, or manganese; and, Y will be silicon, aluminum, or iron. The appropriate generalized formula is thus $(Mg,Fe,Ni, Mn,Zn)_2-3(Si,Al,Fe)_2O_5(OH)_4$. Chrysotile, antigorite, and lizardite are three of the primary serpentine minerals. There are many other serpentine minerals, most of which are rare.
SODALITE	Mineral	Sodalite is a rare rock-forming mineral best known for its blue to blue-violet color. It has a chemical composition of $Na_4Al_3Si_3O_{12}Cl$ and is a member of the feldspathoid mineral group. High-quality sodalite is used as a gemstone, a sculptural material, and an architectural stone.