

# GEMSTONES:

FROM ROUGH TO POLISHED



A HANDBOOK

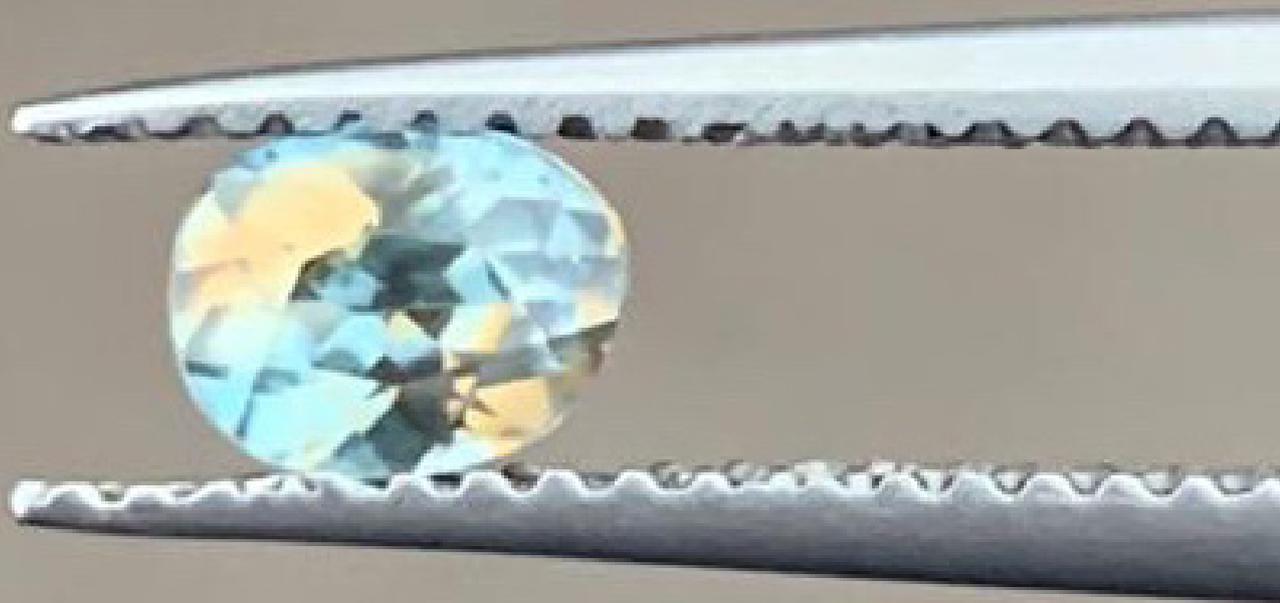


Anpé Atelier cph  
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# GEMSTONES: FROM ROUGH TO POLISHED

**GEMSTONES** are some of nature's natural wonders. The bright and sparkling stones are put into jewellery so that we can wear and treasure them for a lifetime, and continue to pass them down through generations.

But what most people are unaware of is, these stones that we value so greatly don't start off as the perfectly polished things we see mounted in intricate designs. Rather, they are found as [rough, rock-like elements](#), and it is only until they have been sorted through, that they are preformed, cut and faceted to become what we know them as. In this booklet, you will learn about the magical process that a gemstone goes through to achieve its incredible luster and brilliance.



# A GEMSTONE IN THE ROUGH

**GEMSTONES** in the rough look more like rocks than the polished stones we see in a finished product. They are formed underneath the earth's surface predominantly through *heating, cooling and high amounts of pressure*. There are three types of ways gemstones can form: igneous, metamorphic and sedimentary.

Igneous stones are formed in the earth's mantle, just below the earth's crust. Sapphires, rubies, and diamonds are formed through this process. Diamonds, for example, are found 110 to 150 miles below surface, and are formed through crystallization from piping hot magma. Volcanic eruptions, erosion, mountain forming and weathering push them up towards the surface where they can be found through mining. In most cases, sapphires can be found 6 to 18 miles below surface, and similarly to diamonds, are moved up through the earth due to natural movements.

Sapphires belong to the mineral known as corundum. They are one of the rarer gemstones and can take millions of years to form underneath the earth's surface. Sapphires are made up of aluminum oxide and other trace elements, such as iron or magnesium. These trace elements determine the color of the sapphire, for example, whether the sapphire will be a royal blue color or a ruby red color. Sapphire deposits can be found in Sri Lanka, which is where most of our stones are sourced, as well as Madagascar, Myan-

mar, Thailand, China, Australia, Nigeria and Pakistan. Sapphires from different places have different chemical makeups due to different impurities, which gives the stones a different color and clarity. Those from Sri Lanka, Kashmir and Burma are historically the most prized within the industry. Ceylon sapphires, for example, are incredibly prized and are only found in Sri Lanka. They are famous for their vibrant light blue color.

The rough stones are found through the process of mining. There are a number of different styles of mining, such as, mechanized mining, pit mining and river mining. Traditional mining practices are encouraged within Sri Lanka, as there is less harm done to the land. Mining licences are regulated by the National Gem and Jewellery Authority (NGJA) who take the rehabilitation of land after mining very seriously.

Once the rough stones are found, they are sorted by shape and color and are ready to move on to the next step: pre-forming.

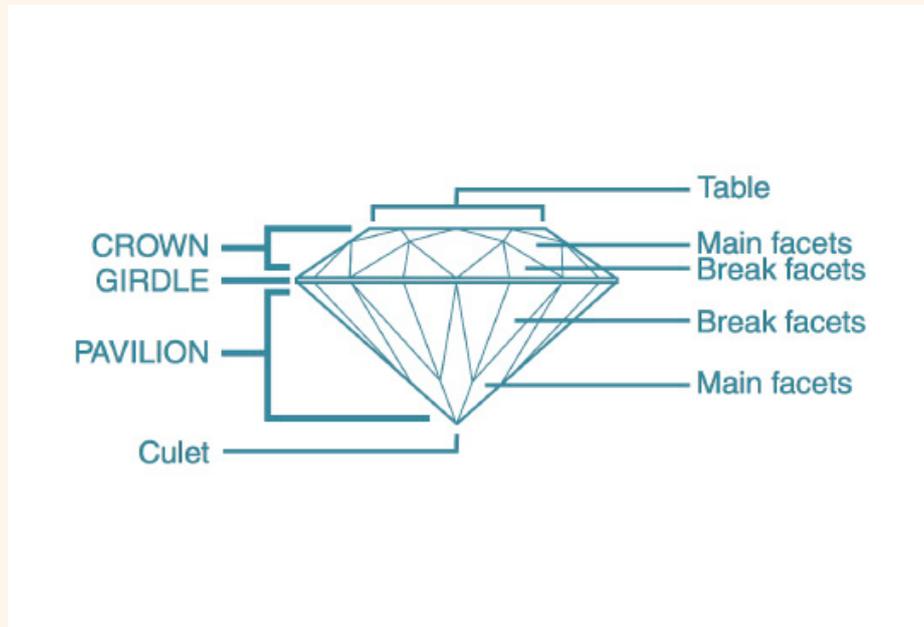


**STEP 1:**

*Rough rock-like stones are found through mining practices*

# PRE-FORMING GEMSTONES

**FOR LAPIDARIES**, otherwise known as gemcutters, making each gemstone is a work of art. There is a precise way of thinking for gemcutters to figure out the best way to accentuate a stone's prominent features. Preforming is a part of the faceting process. It is the first step, where the rough stone is ground by hand on a series of wheels or flat laps to get an overall shape. From here, the faceter will be able to look more closely at the stone and get a better idea of how to orient it properly for the next cutting step. The process of cutting and forming rough stones is incredibly complex. There is an entire anatomy that relates to a single gemstone. Each side and edge have a name and play an important role in bringing out the fire and brilliance in a stone.





## STEP 2:

*The stones are assessed on size, color, and clarity which influence the optimal shape and cut.*

# FACETING: CUT AND POLISH

**FINALLY** we are getting closer to the finished product! After preforming, the gem goes through a process of facetting. The faceter attaches the stone to a brass dop (post) that will fit into the spindle of the faceting machine mast. Next, the faceter completes the pavilion and girdle (see previous illustration to see gemstone anatomy). The final size of the gemstone is set and ready for the crown. The lapidary follows a few more intricate steps that include cutting and polishing, and finally come out with a finished product: a stunning, sparkling gemstone, ready to be set in fine jewellery.

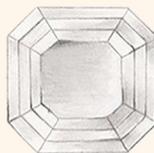
## POPULAR GEMSTONE CUTS & SHAPES



*Cushion Cut*



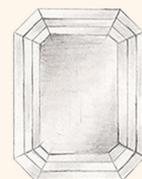
*Round Brilliant  
Cut*



*Asscher Cut*



*Marquise Cut*



*Emerald Cut*



**STEP 2:**  
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