Module B. Colour from the Cosmos

Lesson 11 - Processed Diamonds

The 4 Cs

Cut and polished diamonds are evaluated by four primary variables, all beginning with the letter C (hence the 4 Cs): Cut, Clarity, Colour, and Carat. All variables are equally important and it is their unique combination that defines the value of a diamond. The standardized 4C system for diamonds was introduced by De Beers in the late 1930's and has gained widespread use across the world by gemological laboratories such as GIA and EGL, as well as jewellers and consumers. Variations on the 4Cs have been used for other gemstones as well, but not to the same extent as with diamonds. A fifth C has been proposed in recent years to reflect the**C**ountry of origin. This has bearing on the historical significance of a stone, but more importantly, on the verification that the diamond is not a conflict stone.

The image and video link below are about a wonderful faceted gemstone, though not a diamond. The mineral is cerussite, a lead carbonate, which has particularly high refractive indices and dispersion. Terri Ottaway of the Royal Ontario Museum speaks about the properties of this particular gemstone and the difficulty of the cutting process - a nice primer before understanding the 4 Cs.

"The Light of the Desert", a faceted cerussite (PbCO3) from Namibia, 898 carats. Image from the [Royal Ontario Museum](http://www.rom.on.ca/index.php).

View this 3-minute video on [Cerussite](https://connect.ubc.ca/bbcswebdav/pid-2559736-dt-content-rid-10494258_1/courses/SIS.UBC.EOSC.118.99C.2014WC.44220/Course_Files/moduleB/lesson11/movie/cerussite.mpg). It describes a remarkable ~900 carat gem on display at the Royal Ontario Museum in Toronto, Ontario. Use the [Cerussite Guide](https://connect.ubc.ca/bbcswebdav/pid-2559736-dt-content-rid-10494258_1/courses/SIS.UBC.EOSC.118.99C.2014WC.44220/Course_Files/moduleB/lesson09/download/Cerussite-Video-Guide.pdf)to help you through the video.