

The Wonderful World of Gems

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Gemstones have long fascinated humankind, probably since we first put two steps on the earth, but what makes them so special?, and how do they form?. The earliest known mining for gems was for lapis lazuli in NE Afghanistan over 8000 years ago, and this area is still being mined today. Gems are valued according to how pleasing they are to the eye, how clear they are of inclusions, how large they are, and how rare they are. Deep red diamonds are the most valuable, reaching \$1 million per carat (that's only 0.2 grams). Gems form in a large variety of geological environments from deep (100's of kilometres) within the earth's mantle under conditions of high temperature and pressure to the near surface of the earth under conditions of low temperature and pressure.