



In The News

Current Events in Earth & Space Science

Summaries for the Classroom

Diamond Impurities and Earth's Tectonic History

Most people prefer their diamonds pure and free from imperfections. But a study of more than 4,000 inclusions (pockets of impurities) found in diamonds has revealed that Earth's plate tectonic history began much earlier than scientists originally thought.

Articles to Share with Students

Flawed Diamonds Deliver Precious Details About Early Earth's Tectonics

<http://www.scientificamerican.com/article.cfm?id=diamonds-plate-tectonics>

Diamond Impurities Bonanza for Geologists Studying Earth's History

http://www.nsf.gov/news/news_summ.jsp?cntn_id=121047&org=NSF&from=news

Diamonds Hold Secret About Plate Tectonics

<http://blogs.smithsonianmag.com/science/2011/07/diamonds-hold-secret-about-plate-tectonics/>

General Information

Geology: Plate Tectonics

<http://www.ucmp.berkeley.edu/geology/tectonics.html>

Diamonds – New York Times Science Topics

<http://topics.nytimes.com/topics/reference/timestopics/subjects/d/diamonds/index.html>

Diamonds – American Museum of Natural History

<http://www.amnh.org/exhibitions/diamonds/formation.html>

Historical Perspective [This Dynamic Earth, USGS]

<http://pubs.usgs.gov/gip/dynamic/historical.html>

Questions for Classroom Discussion

- How and where do diamonds form?
- Define plate tectonics.
- What is the Wilson Cycle?
- How do diamond impurities form? What data are contained in diamond impurities?
- How do we know the age of the diamonds?
- To summarize, how can diamonds tell us about plate tectonic history?
- What is the significance of this new discovery?

Compiled July 28, 2011, by L.A. Guertin