Rock Talk

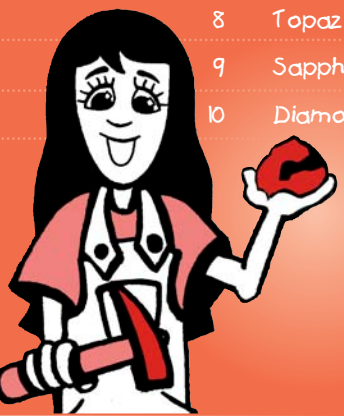
Fourth Edition

SCRATCHING MORE THAN THE SURFACE

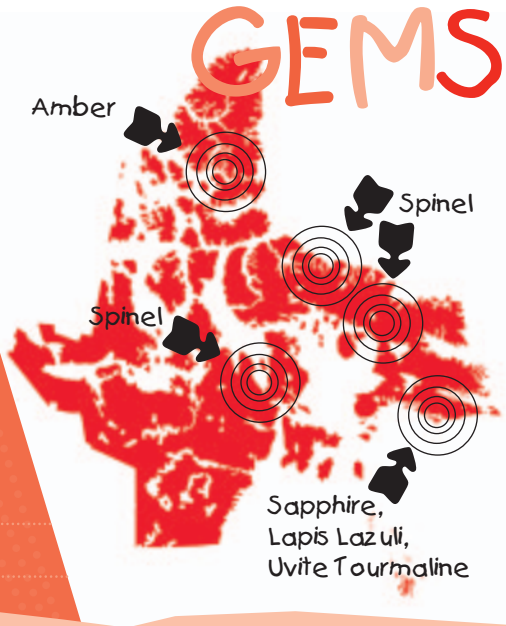
Minerals can be very hard like diamonds or very soft like talc (used in talcum powders). To measure the hardness of a mineral, German mineralogist Friedrich Mohs created the Mohs scale of hardness. This scale shows the scratch resistance of one mineral from another. The harder the mineral, the higher the scale and the greater its ability to scratch a softer mineral.

Here are some examples:

Hardness	Mineral	Other items	Hardness
1	Talc	Fingernail	2.5
7	Quartz	Gold	2.5 - 3
8	Topaz	Penny	3.5
9	Sapphire	Knife blade	5.5
10	Diamond	Glass	6 - 7



NUNAVUT'S COLOURED GEMS



Heated to perfection!

Colourless and pale sapphires are usually heat-treated to give them a deep blue hue. Heat-treatment exposes minerals or gems to a lot of heat to improve colour or to remove imperfections. The sapphires near Kimmirut have a natural intense blue colour, which means they don't need to be heated.

Are you a rock expert? Test yourself to find out.

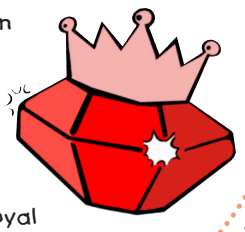
1. Exposing minerals to intense heat to improve colour or to remove imperfections is called _____.
2. _____ created the Mohs scale of hardness to measure the hardness of minerals.
3. True or false: Many gemstones can be developed artificially in a lab.
4. The hard blue gems found near Kimmirut are called _____.

Answers: 1. Heat-treatment 2. Friedrich Mohs 3. True 4. Sapphires

did you know

Many gemstones can be grown artificially in a lab. These are known as synthetic gemstones. They have the same physical, chemical and optical qualities as the natural gemstones. Synthetic gemstones are much cheaper than natural ones.

Fast fact



The red variety of Spinel may be mistaken for rubies. The Black Prince's Ruby adorning the royal crown of England is actually a 170 carat red spinel.

Contact Us

If you have a geology question you want answered, send an e-mail to nunavutminerals@inac.gc.ca.

Rock Talk is produced by Indian and Northern Affairs Canada, Nunavut Regional Office.

We welcome your questions, comments or suggestions. Please e-mail us at nuinfo@inac.gc.ca or phone 867 979-7943. Visit our Web site at www.inac.gc.ca/nu.

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