



Okatok is huge boulder that is visible on the prairies from far away and was likely an important landmark for many people in the past. It is made of quartzite, a sedimentary rock that was formed between 600 million and 520 million years ago in a shallow sea. Sometime between 10,000 and 30,000 years ago, it was brought by first a rockslide and then by a glacier to its present-day location in southern Alberta. A traditional Blackfoot tale involving the trickster Napi tells the story of how Okatok came to have a large split down its middle.



Mistaseni means big rock in Cree and was a large erratic roughly 100km south of Outlook. For thousands of years, it was a meeting place and spiritual site for many Indigenous peoples living on the prairies. It is also called Buffalo Child Stone. In the late 1950s, the Saskatchewan government was planning to build what is now Gardiner Dam on the South Saskatchewan River. When it became evident that Mistaseni would end up underwater, there were protests and attempts to raise funds to move the erratic to higher ground, but in 1966, government workers blew it up. Sadly, it now sits in pieces on the bottom of the lake.



CAMPUS BOULDERS

If you wander around the University of Saskatchewan campus, you will see some unique boulders called *glacial erratics*.

Gigantic glaciers covered the northern part of our continent several times in the last 2 million years. As the glaciers flowed south over the land, they bulldozed the bedrock below them and picked up and dragged bits of rock. These could be the size of a pebble to larger than a house. These rocks would then drop out of the ice when the glaciers melted, leaving them behind "erratically". Most of the local erratics we see today are originally what is now northern Saskatchewan as well as the Northwest Territories and Nunavut.



scan here to listen to Spike Eaglespeaker Jr. telling the story

The Museum of Natural Sciences sits on Treaty 6 territory, the traditional lands of the nēhiyawak, Anihšīnāpē, Dēnēsųlīnē, Nakoda, Dakota, and Lakota, and the Homeland of the Métis. We acknowledge, respect, and honour the deep relationship that they have with the natural world, and we are grateful for the opportunity to share in the beauty and nurturance that the land, water, and sky offer. We open ourselves to this place and all that it chooses to share with us.



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Translations: itwēwina Plains Cree Dictionary and Gabriel Dumont Institute Heritage Michif Dictionary

This igneous rock was formed deep in the Earth when magma cooled and solidified. It is about 1.9 billion years old, the age of a lot of the exposed rock in northern Saskatchewan, which was created when continents collided and huge mountains rose. The pistachio green stripe is likely from minerals in hot salty waters that filled a fracture in the rock after it crystallized.

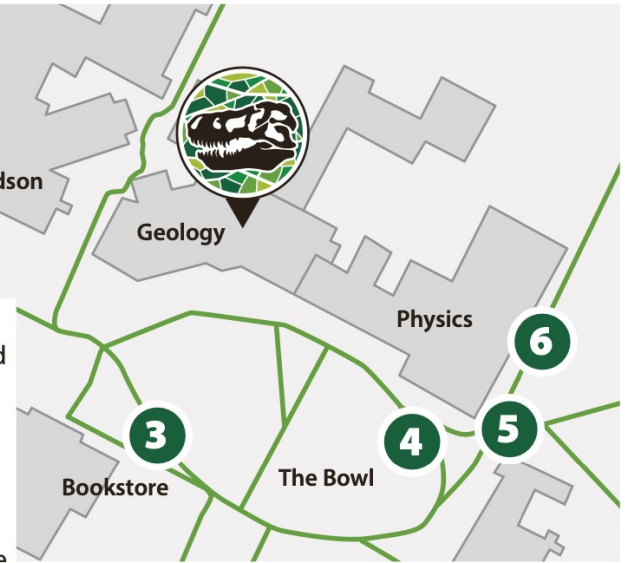


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This igneous rock was metamorphosed about 1.8 billion years ago in an ancient mountain range that would have rivalled the Himalayas but has since eroded. Look around the back of the boulder. Do you see the darker patches? These are fragments of the Earth's crust that got incorporated into the magma before it crystallized.



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This is gneiss which is pronounced "nice", and it is a metamorphic rock. The original granite is about 1.9 billion years old, but it was metamorphosed 1.8 billion years ago when it got re-baked and squeezed in the Earth's crust, creating the layers of pink feldspar and black mica.

This is a sedimentary rock that was created 450 million years ago when a huge shallow sea covered much of what is now Manitoba and Saskatchewan. Although it is similar to the Tyndall Stone you can see in the benches and walls at the Museum of Natural Sciences and other places, it does not have as many fossils.



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This is gneiss, a metamorphic rock formed from granite that was heated to temperatures over 600 °C and squeezed at high pressures when it was metamorphosed in the Earth's crust 1.8 billion years ago. Some of the oldest rocks found on the Earth's surface are gneisses, at 4 billion years old! The pink bands on this boulder are feldspar and the dark bands are hornblende.

This boulder is made of dolomite, a sedimentary rock formed by layers deposited on the bottom of a shallow sea that covered a large part of the continent for almost two hundred million years. It is about 450 million years old, younger than some of the other boulders on campus, but still very old. It is the same kind of rock that is used to build many of the campus buildings.

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