

## CWSF 2018 - Ottawa, Ontario



### Cale McConkey

#### Trees and Temperature

**Challenge:** Environment

**Category:** Junior

**Region:** Central Interior British Columbia

**City:** Prince George, BC

**School:** St Mary's

**Abstract:** Western red cedar in the interior rainforests of British Columbia experience heart rot often forming a cavity within their trunk. This creates an opportunity for rot to generate heat within the tree and also for ground heat to rise, potentially influencing local snowmelt, climate, and hydrology. This study evaluated tree core temperature differences between cedar (rotten) and spruce (solid core) over two weeks.

#### Biography

Cale McConkey is a grade 7 student at St. Mary's School in Prince George, British Columbia, Canada. Cale has always loved science and has had lots of questions. Cale and his two younger brothers love exploring the outdoors and nature with their mom and dad at their home in Prince George and their cabin on Quesnel Lake. Cale's dad, an environmental scientist, has fostered these inquisitive minds and loves explaining the connections in the environment around us. The inspiration for the project came from many a long walk in the woods looking up at the magnificent trees in the forests that surround Prince George, a city in a forest. Prince George is BC's northern capital and the perfect northern climate to study the temperature of trees and their response to dramatic cooling and warming temperatures in winter. Finding out how the trees may store warmth in their core and the affect this may have on its long-wave radiation. Long-wave radiation is a factor of snowmelt which affects groundwater levels and creeks. This amazing project opens the opportunities for much more resource and study.

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