



3. TEACHER INFORMATION CARD

Geographical and natural features

- **Boundaries:** The National Capital Region measures 4,715 square kilometres and spans over two provinces. The Ottawa River flows through the centre of the National Capital Region, creating the boundary between Ontario and Quebec.
- **Geological formations:** The region straddles the boundary of two geological formations: the Canadian Shield and the St. Lawrence Lowlands. It is relatively flat south of the Ottawa River, contrasted by more elevated terrain directly to its north.
- **Rivers:** Canada's capital is a waterfront capital. Three major river systems meet in the region: the Ottawa, Rideau, and Gatineau rivers. The Rideau River and Gatineau River flow into the Ottawa River, forming one of Canada's largest river systems – measuring 1,271 kilometres in length, with a watershed of approximately 146,000 square kilometres.
- **Climate:** The region has a humid continental climate and four distinct seasons. Its northern climate and location at the cusp of the northern boreal forest are rare among major world cities.

Unique ecosystems

- **Mud Lake**

This 60-hectare natural environment is a complex of wetlands along the Ottawa River, the majority of which is made up of deciduous swamp forest. The driest part, to the west, contains a mature forest stand which is made up predominantly of white, red, and burr oak, as well as white pine. Mud Lake is a habitat for a wide diversity of animal species and serves as an important environment for bird conservation.



- **Eardley Escarpment**

The Eardley Escarpment is the dividing line between the rock of the Canadian Shield, which covers more than half of Canada, and the St. Lawrence Lowlands. It rises 270 metres from the floor of the Ottawa Valley and extends over more than 30 kilometres. The escarpment's southern exposure gives it a hot, dry microclimate, similar to the forests of the American Midwest. Because of this unique microclimate, it is home to many rare species. More than half of Gatineau Park's 145 plant and animal species at risk are found on the Eardley Escarpment.





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- **Pink Lake**

Pink Lake is meromictic, meaning that its upper and lower layers of water never mix. Normally, a lake's water layers mix completely each year during the spring and fall, because of water density, water and air temperature, and the wind. The mixing of lake waters distributes nutrients and oxygen evenly throughout the lake. Pink Lake's waters do not mix, because it has a small surface and bowl-like shape, and is surrounded by steep cliffs that protect it from the wind. There is no oxygen in the deepest seven metres of the lake. With no oxygen at the bottom of Pink Lake, there is only one organism that lives in its depths: a prehistoric anaerobic organism. It is a pink photosynthetic bacterium, which uses sulphur instead of oxygen to transform sunlight into energy.



- **Mer Bleue Bog**

Located in the southeastern sector of the National Capital Greenbelt, the 3,500-hectare Mer Bleue conservation area provides a unique opportunity to see a northern boreal landscape. The Mer Bleue Bog is approximately 7,700 years old, and is a habitat for many species of regionally and significantly rare plants, birds and other wildlife.



- **Pinhey sand dunes**

The Pinhey Sand Dunes represent one of the most unique ecosystems in the National Capital Region. The area was part of the sands of the Champlain Sea, which was formed after the retreat of the Laurentide ice sheet over 10,000 years ago. The dunes provide habitat for a number of plant and animal species that can live only in sunny, exposed areas.

