

Activity 4.2: Exam-style practice

This time you will be given only the statements and the text, the way you would be in the exam. Try to ask yourself the same kinds of questions as in Activity 4.1.

Suggested time: 12 minutes

Do the following statements agree with the information given in the reading passage?

Write:

TRUE if the statement agrees with the information

FALSE if the statement contradicts the information

NOT GIVEN if there is no information on this.

1. Cape Breton Island is in Quebec.
2. All of the Magdalen Islands are connected by Route 199.
3. Sea ice helps to protect the islands from storms.
4. Researchers began to notice the sea ice decreasing in the 1990s.
5. Before 1990, the ferry to the Magdalen Islands operated only for half the year.
6. As water freezes, it causes sandstone to break apart.
7. Each island loses 10–110 centimetres of coast per year.
8. A number of homes were swept away by storms the previous year.

Islands in the Storm

Nick Walker

Québec's Îles-de-la-Madeleine (Magdalen Islands) lie in the heart of the Gulf of St Lawrence, about 90 kilometres north-west of Cape Breton Island. Twelve islands make up the small, sandy archipelago, the six largest connected by many kilometres of thin sand dunes, across which runs Route 199. Open sea and salty lagoons stretch out on both sides of the scenic thoroughfare. In recent years, the islands' 13,000 residents have watched intensifying natural forces threaten the boundaries of their home. Warmer winters and fiercer storms, rising seawaters and the slow sinking of the islands are responsible for an alarming loss of coastline, and the erosion appears to be accelerating.

For locals, called Madelinots, high winds and ocean storms have always been a part of life on the islands. Dominant north-west winds blow through the Gulf of St Lawrence throughout the winter; typically, ice cover in the north is driven south and accumulates along the north side of the island chain. A high concentration of sea ice (30 per cent of the water surface

or more) obstructs the storm waves that would otherwise batter cliffs and reshape road-bearing stretches of dune. Coastal ice shields the archipelago's shores from the destructive effects of rainwater and sudden freezes. But according to ongoing studies by Montréal-based climate-research organization Ouranos, by somewhere between 2050 and 2090, there will be no ice formation in the gulf.

Researchers have noted a significant decrease in ice thickness and surface area in the gulf since the 1990s. This has benefited navigation and communication with the archipelago – the ferry from Souris, PEI, to Îles-de-la-Madeleine started to offer year-round service in 2009 – but is harmful to the fragile sandstone coasts.

Sandstone is susceptible to gelifraction or frost shattering. More frequent freezing and thawing cycles are characteristic of progressively mild gulf winters. Water either melts or is rained into cracked and porous sandstone and shale, where it expands and 'explodes' the rock as it freezes. Already, an annual average of 10 to 110 centimetres of coast are lost around the perimeter of the islands, though intense storms can destroy up to 10 metres along certain cliffs. With every storm comes the danger that the erosion of precious coastline will swallow sections of residents' properties or buildings (four summer homes were moved inland last year and a storm swept away another) or will compromise vulnerable stretches of the vital south and north islands connecting Route 199.

'Wherever we can, we will retreat,' says Mayor Joël Arseneau. 'Our priority must be the protection of the public infrastructure that we all need.' Yet it will not be easy for Madelinots to flee from the dangers of crumbling cliffs and rising waters. Many of them have centuries-old roots on the archipelago. Louis Vigneau, manager of the local Transports Québec office, says that he's been here since 1792. 'I have salt in my blood,' he laughs, 'and sand also!' Two hundred and twenty years ago, his ancestors crossed the blustery gulf from Saint Pierre et Miquelon, landing on Île du Havre Aubert, just 25 kilometres south of his present home in Cap-aux-Meules. He and the municipality are waiting for a Transports Québec study that will provide an action plan for the management of the islands' transportation infrastructure. While they wait, they reinforce threatened stretches of highway with sand dredged up from the major harbour on Île du Cap aux Meules.

Guglielmo Tita, scientific director of the Research Centre on Island and Maritime Studies at Université du Québec à Rimouski and a resident of the Îles-de-la-Madeleine for the past nine years, attests to the anxiety that pervades the archipelago, particularly during stormy weather. Yet Tita is originally from Sicily, Italy, where the island landscape is dominated by the active volcano Mount Etna. 'People live on and around the volcano just as people live here, where there are serious erosion problems,' he says. 'While we apprehend and fear the danger, it's our land. It's where we live, and we continue living.'

When you have finished, check your answers in the Answer Key in Appendix 1.