Eco Literature New Brunswick, Reading Comprehension

David Oh

Preface

This reading comprehension booklet's purpose is to achieve two goals: to attain the New Brunswick general curriculum outcomes of the reading and viewing section and teach students about environmental aspects. To facilitate the English curriculum, the booklet is divided into four sections: articles, essays, short stories, and poems to fit teachers' needs. The first five questions of each reading comprehension are multiple-choice, with the sixth and seventh questions being open answer questions. The answers to the written answer questions typically have varied responses. Teachers may choose to use only the first five questions when testing. The poems follow a different format. Teachers are free to use, copy, and print this resource in any manner they see fit. This project was made possible with the cooperation and funding of many organizations such as Learning for Sustainable Future, Rising Youth, and individual volunteers. Special thanks to Natasha Leblanc, Pamela Fowler, and Marc Basque for making this project possible.

This resource was made in the ancestral and unceded territory of the Mi'kmaq People

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All literature pieces are in increasing difficulty

Interview with Will Bauer

Written by David Oh

I interviewed a former employee of the Petitcodiac Watershed Alliance and a candidate for Master of Science at McGill University, Will Bauer. Firstly, I asked him to tell me about the **Broken Brooks Project** that he worked on with the Petitcodiac Watershed Alliance.

[1] *“ That was my first summer job – the first job ever. I just graduated high school, and I got the Seed grant; what it does is: the provincial government of New Brunswick pays half of your salary. You apply (to the government), get your seed grant, then you apply to a place where you want to work that is accepting seed grant students, and (if) they hire you, they only have to pay for half of what they would pay a minimum wage student job. It is an incentive to take on students to get experience!”*

“ You have this Petitcodiac Watershed (PRW), surrounding the greater Moncton area, and the PRW has a long history of being very polluted, lots of species in endangerment, just a lot of bad stuff. And one of the things that is an ongoing effort among many non-profit organizations, in the greater Moncton area, is the habitat restoration around the PRW.”

“ So, the PRW consists of primarily the Petitcodiac, but also a whole lot of other rivers flow into it, from there are a lot of tributaries that flow into those rivers, from those tributaries there are streams, and sometimes those streams go underneath the road through passages called culverts. Then, when the water gets high enough, the adult fish can spawn there and lay their eggs.”

“ What the idea was, you go around to the culverts in the PRW, and you take a whole bunch of geographic measurements, water quality samples, which river it flows into, and then we determined whether or not the culverts could allow fish passage. If they did, everything was fine. But if a landslide or clogging of the drains or something on those lines happened and the water wasn’t passing through, we would either fix them or schedule them to be fixed. It was a really interesting summer with them.”

The significances of culverts are unequivocal, and blocked culverts raise serious issues. For example, according to a publication from the Ministry of Transportation and Infrastructure from British Columbia, "culverts may reduce habitat connectivity by blocking fish access to important spawning and rearing areas such as the mainstem, tributaries, ponds, and wetlands." So, I asked what the process of fixing the culverts would appear like.

[1], "*So some of them were unfixable with our ability. You would have to do a decent amount of construction to fix it up. Easily fixable ones; typically, we would be building these rock weirs. So, you would have the pipe underneath the road, and the water would be flowing out; as soon as the water flew out of the pipe, it would branch out and go in the bigger stream. We would get a big order of rocks and get them to dump off the rocks to the side of the road, and we would stack the rocks in a "U" formation around the outside of the exit to the pipe. It would raise the water level just immediately out of the pipe, so that gives fish the space to swim around that area, and because the water was raised in that area, it would raise the water level in the pipe and give the fish a little bit more depth to lay its eggs and swim in. And then the other times, fixing the culverts just ended up being like cleaning them up. A lot of times they were blocked off by fallen branches; sometimes, rarely, unfortunately, they were clogged up with pollution, just like plastic being thrown away. And in those cases, you know... you wear gloves, just haul it out, put it in the back of the truck and take it to the dump.*"

After a longer interview, we said our good-byes, but even as I write this now, it warms me, knowing that people are working tirelessly to make the world a better place. They are the ones protecting the salmon and all other creatures, making sure they don't go extinct. They are the silent defenders, the superheroes, working behind our backs so that we can "swim" forward.

1 What is the tone of the interviewee in the paragraph with superscript 1?

A. Reflective
B. Regretful
C. Monotonous
D. Excited

2 The term unequivocal most likely means?

A. Disputed
B. Uncertain
C. Unchallenged
D. Ignored

3 What typically causes culvert clogging?

A. Human interference
B. Animal interference
C. Natural occurrences
D. A and B

4 Which set of words best describe the tone change from the start of the paragraph with superscript 2 to the end?

A. Neutral to Infuriated.
B. Emotional to Grieved.
C. Casual to Saddened.
D. There was not a **change** of tone.

5 What would most likely have been the very next question?

A. Where are some places you could work with the SEED grant?

B. Did you enjoy your work with the Petitcodiac Watershed Alliance?

C. What animals did you encounter while working?

D. Were there any other activities you did with the Petitcodiac Watershed Alliance?

6 Explain the final sentence of the text.

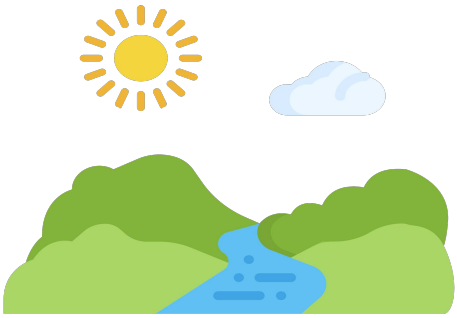
7 In a small paragraph, address what a culvert is, its significance, and how to fix it.

Watershed Conservation Champions

By Darlene Elward

The Petitcodiac Watershed Alliance (PWA) is a non-profit and charitable organization located in the southeastern New Brunswick region, with the utmost dedication to work with the communities, river landowners and stakeholders on actions to maintain a healthy environment and enhance water quality for current and future generations of the Petitcodiac watershed. Monitoring water quality, habitat conditions and species-at-risk populations can provide key information on watershed improvements performed. The best land management practices adopted in the region can make great tangible impacts on aquatic ecosystems.

Watersheds throughout the province are seeing more climate change impacts associated with increasing temperatures, water quantity and water quality. Protecting natural environments such as forests, riparian zones, and wetlands are not only essential to providing habitat to wildlife but also to keep water temperatures cooler in river systems. Warming temperatures threaten cold-water fish species such as the Brook Trout (Salvelinus fontinalis) and the Atlantic Salmon (Salmo salar). Their survival and development require cooler water temperatures during the summer months, ideally ranging from 13°C to no higher than 20 °C, depending on the species and their life stage. The shaded areas produced by the plants and tree canopies offer the proper water temperature conditions, leading to better -oxygenated water for these species. Additionally, natural environments have the capacity to manage increasing amounts of carbon dioxide (CO2) in the atmosphere.



Forests and wetlands can sequester and store large quantities of blue carbon - carbon naturally stored by the ecosystems. These environments also help manage intense rain events, surface water run-offs and flooding in both rural and urban settings. Urban areas, particularly, have many gray infrastructures surrounding the development like buildings, parking lots and roads. These non-porous surfaces inevitably increase the surface water run-off and flooding, and storm drains' capacities aren't adapted to properly drain sudden great amounts of rainwater. According to the Petitcodiac Watershed Alliance's *"Water Quality Defenders: best management practices to protect water quality in urban areas to reduce and divert pollutants from entering watercourses within the Petitcodiac watershed"* report 2018-2021, adding greener infrastructures such as rain gardens, green walls and green roofs can help build resiliency against these climate change issues in the watershed and improve water quantity and quality in the process.

In reference to the Petitcodiac Watershed Alliance's ***"Freshwater Mussel Habitat Stewardship in the Petitcodiac Watershed through Monitoring, Outreach and Restoration Activities"*** report 2018-2020, wildlife and species at risk are often threatened by human activities and poor land management practices that affect their habitat conditions and essential resources to their survival. Riparian zones are the transitional zone between aquatic and terrestrial ecosystems that naturally help protect watercourses from these activities, but they often lack vegetation of all sizes, which properly filters out pollutants, bacteria and nutrients from leaching into the freshwater. Root systems from various plants are also important components to stabilizing the river banks' constant changes from natural fluvial processes. Planting trees and shrubs in riparian zones and keeping the buffer at least 30 meters wide can significantly improve freshwater habitat. Infrastructures, such as culverts, installed at many road crossings throughout the province also frequently pose challenges to aquatic species — restricting fish passage if assessed as partial or full barriers, according to the Petitcodiac Watershed Alliance's project ***"Broken Brooks: Improving Habitat for Inner Bay of Fundy Atlantic Salmon Through Environmental Stewardship".*** Infrastructures such as culverts need continuous updates or temporary improvement solutions to measure up to the environmental changes and aid fish to access upstream habitats. Some temporary solutions include professionally installed outflow chutes and rock weirs, which help adjust water levels at these barriers.

[1] Environmental stewardship in watershed communities is paramount in protecting and enhancing the ecological services of the Petitcodiac watershed. Taking action together, as a community, to improve the local environment makes a huge difference. Organizing community engagement opportunities for trash cleanups and properly disposing of plastics can prevent harmful impacts on wildlife and water quality. Adopting zero-waste habits is also a great combined effort to reducing waste in the environment. Otherwise, single-use plastic adds up quickly with nearly 8 billion people on the planet. Promoting year-round household water conservancy habits can help secure water resources during dryer periods — reducing water consumption, using water-efficient appliances and harvesting rainwater to water the gardens. Building pollinator gardens and reducing the frequency of lawn mowing in the spring are other great ways to help provide local pollinators with the first resources of the season to survive and provide our growing communities with successful food production and food security.

Collectively, citizens need to be kind and build a sense of appreciation towards the environment, as everyone should to secure its health for the future.

1 What is the purpose of this article?

A. To inform
B. To advertise
C. To persuade
D. To advocate

2 Which statement would the author most likely disagree with?

A. There must be a technological improvement in storm drains or less non-porous surfaces.

B. Green infrastructures are better alternatives to gray infrastructures.

C. Riparian zones do not need a wide variety of vegetation.

D. Community activity is necessary for environmental action.

3 What is not true of cooler water temperature?

A. It creates better-oxygenated water.

B. It is necessary for cold-water fish species.

C. It can be produced by plants and tree canopies.

D. All cold-water fish species depend on 13°C to no higher than 20 °C.

4 What would be the best possible antonym of the word “paramount” in the given scenario?

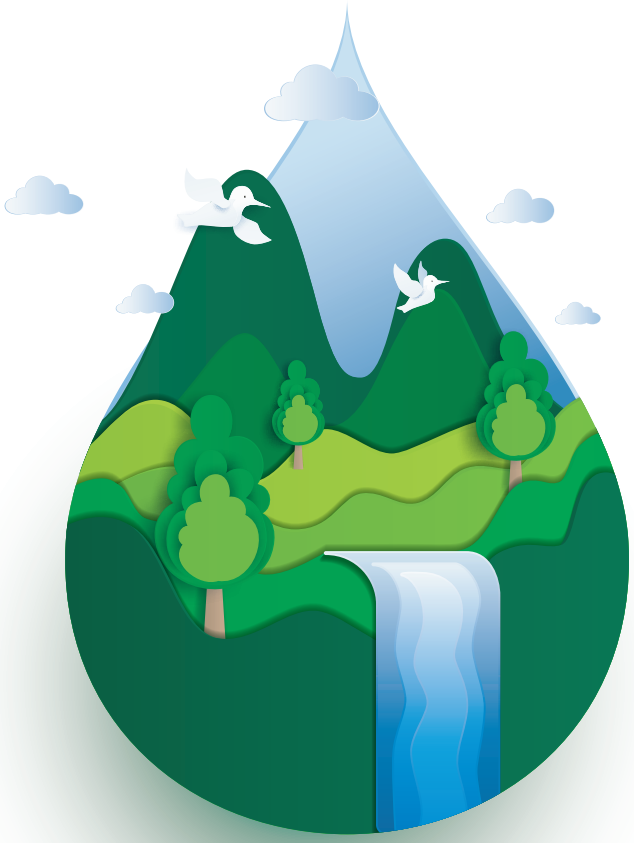
A. Inferior
B. Unimportant
C. Short
D. Tiny

5 What is the tone of the paragraph with superscript 1?

A. Lively
B. Hyper
C. Desperate
D. Rejected

6 What would gray infrastructure most likely be?

7 Pitch an idea for a community engagement activity and justify its benefits.



A Plea To The People Of New Brunswick:

Don't let it happen. The Sisson Mine is a disaster we can't afford.

By Tom Cheney

Every summer I go trout fishing on the Nashwaak river. Actually, I mostly go fishing on one of its tributaries. It's a relatively healthy system, with no major dams and cold, clean water. I know a couple of good spots and even on a bad morning I still usually hook a fish or two.

In June there are lots of seatrout around, but I enjoy catching the smaller resident fish just as much. I play them quickly, land them gently in my net, and hold them in the water for just a moment before they swim free. They are beautiful and innocent, and my brief encounters with them always fill me with a simple but profound happiness.

It won't be too long before my children will be old enough to learn to cast flies for trout. More importantly, they will be old enough to learn the magic of wild fish in healthy ecosystems. I envisioned myself teaching them those lessons on that little tributary of the Nashwaak. Now that vision is in danger because someone has decided that wild fish and their habitats are expendable — or at least exchangeable for a few jobs.

I'm not going to list all the ways that, simply by its construction, the Sisson Mine would be an ecological disaster. You can look those up. I will note that the former government under Prime Minister Stephen Harper did everything it could to prop up weak mining projects like this one. That government stripped provisions to protect fish habitat — brooks and streams like the Napadogan and Sisson that feed the Nashwaak River — from the important Fisheries Act. A plea to the people of New Brunswick: Don't let it happen. The Sisson Mine is a disaster we can't afford.

Fortunately this gutting has now been reversed by legislation in front of our federal Senate. That's thanks to the tireless efforts of conservation groups from coast to coast, like our own Conservation Council of New Brunswick, Atlantic Salmon Federation, and many others. No legislation will protect all of our favourite streams and fishing spots. But it certainly helps. It gives me pause that the Sisson project found its voice only under a ravaged Fisheries Act.

I also won't list the consequences of a Sisson tailings pond failure. We all remember Mount Polley. In August 2014 a massive breach at the B.C. mine site sent 24 million cubic meters of waste water into nearby rivers and lakes. Think about this: Canada has the second worst mining record in the world. During the last decade there have been seven known mine tailings spills in Canada, only one less than in China, which tops the list. My plea today is that you ask yourself how we've let such an atrocious proposal get as far as it has. Generations of New Brunswickers have hunted, fished, foraged, and enjoyed the Nashwaak watershed. Why are we creating the potential for our children to be robbed of their natural heritage?

It's because we've been told over and over — so many times that we actually believe it — a story about natural resources and economic prosperity. That story is simple: the destruction of our natural resources may be unfortunate, but it is a necessary condition of 'progress' and 'economic development.' More and more New Brunswickers are seeing that this story just isn't working for us. Maybe it's time to tell a new one.

There are ways to develop resource industries that don't involve the permanent destruction of biodiversity and wildlife habitat. And there are paths to economic prosperity that don't even require resource development. We can have it both ways. And you don't need to look far to see examples that prove the point.

When the Sisson Mine's proponents tell us that the project is a good way — or the only way — to economic prosperity, they're relying on us to believe that tired narrative. They're asking us to keep believing there are no better options. It's time to stand up and prove them wrong.

[1] New Brunswickers are intelligent, creative, and dynamic. We deserve work of which we can be proud — not just jobs for us today, but for our children as well. We deserve to be in charge of our own economic future. We live in a beautiful province with precious natural resources. There's a way to have a healthy economy that protects our resources rather than destroys them.

The Sisson mine is projected to operate for 27 years. After that it will leave a hideous scar in the earth, ruined fish and wildlife habitat, and countless other ecological tragedies. Those jobs will be gone too. The mine's opponents see that it's not worth it — especially when there are better ways to create work. They've freed themselves of the weight of old narratives and are demanding a brighter, more sustainable future.

I should say that trout aren't the only thing I catch in the Nashwaak river. Every year I hook salmon parr — a surprising number of them. A small and endangered population of wild Atlantic salmon continue to spawn successfully in tributaries of the Nashwaak. If the right people work hard enough, and the right factors fall into place, they could rebound. There's no reason they can't.

Hope like that fuels conservation work — hope that one day my children might fish not just for trout in the Nashwaak, but salmon as well. I have hope for the salmon, and also for the province of New Brunswick. But I need reasons to keep that hope alive, and the Sisson Mine isn't one of them.

1 Which of these phrases best represent the message of the author?

A. "No legislation will protect all of our favourite streams and fishing spots. But it certainly helps."

B: "During the last decade, there have been seven known mine tailings spills in Canada."

C: "That story is simple: the destruction of our natural resources may be unfortunate, but it is a necessary condition of 'progress' and 'economic development'."

D: "There's a way to have a healthy economy that protects our resources rather than destroys them."

2 Which word can be best considered a synonym for the word ravaged?

A. Complete
B. Broken
C. Significant
D. Mismatched

3 The narrator mentions natural heritage. What is the best possible definition of the term "natural heritage"?

A. Heirloom
B. Souvenir
C. Right
D. Inheritance

4 What is the main purpose of the sweet-talking in the paragraph with superscript one?

A. To evoke an empathetic response.
B. To evoke an intelligent response.
C. For self-gratification.
D. To identify the negativity the mine can cause to future generations.

5 This story is told in what perspective?

A. First
B. Second
C. Third limited
D. First Person

6 The tone of this story can be best described as?

A. Defiant
B. Confrontational
C. Advocative
D. Encouraging

7 The author compares the two countries, Canada and China. What did the author try to achieve through this comparison?

ACID RAIN Then and now:

How the 1991 acid rain agreement shows the effectiveness Of taking a stand.

By Joe Tunney

Acid rain may not be a topic you hear about often these days, but once upon a time, it was the hot button issue for environmental organizations all over North America and Europe.

During a speech in 2012, Prime Minister Brian Mulroney said acid rain was *"at the top of the Canadian public policy agenda"* during his time in office. For many veterans of the field, the 1991 acid rain agreement between Canada and the U.S. represents a real win and is a history we're still learning from. While acid rain – mainly caused by sulphur dioxide from coal-fueled electrical plants – hasn't been completely eradicated, it's also not the threat it once was.

"It's as if we caught it just in the nick of time and turned the page with a solution," said Lois Corbett, executive director of the Conservation Council of New Brunswick.

The acidic nature of the pollutant can damage plants, lakes, aquatic organisms and even infrastructure.

The INCO Ltd. smelter in Sudbury, Ont., contributed its share to the problem and was the largest SO2 polluter in Canada. But for the acid rain that fell in Eastern Canada, half came from the United States coal industry — making the problem an international one.

The fight leading up to the accord was a decade long. As Mulroney said, the issue received top billing inside Canada, however, our neighbours to the south were a little late to the party.

In the early 1980s, it was clear the conversation had quite a ways to come, with President Ronald Reagan saying, *"trees cause more pollution than automobiles do."*

Still, Canada's Mulroney government stood its ground and with New England also being affected, conversations eventually began to move towards progress.

But while the prime minister was fighting the battle abroad, inside the country, smaller, regional organizations, like the Conservation Council, were playing their role by campaigning for certain industrial regulations that fell under the provinces' jurisdiction.

"As one of the 52 member organizations of the Canadian Coalition on Acid Rain, the Conservation Council was uniquely positioned to provide public insight and direction during the lead up to annual strategic meetings of the Eastern Canadian Premiers and New England Governors," said Adele Hurley, who spearheaded the coalition with Michael Perley, *"whose mandate includes protection of human health, forests, and the fisheries of Atlantic Canada."*

Other organizations, like cottagers' associations and fishermen's organizations, made waves about the threat, too. Other organizations, like cottagers' associations and fishermen's organizations, made waves about the threat, too.

Corbett said that the scientific team at Environment Canada – as well as other scientists of the day – were strong leaders and stirred policymakers into action on a topic that needed immediate attention.

It was even reported that acid rain could affect the country's maple syrup production.

"Yikes. How much more Canadian of a threat can you get?" said Kai Millyard, a veteran in the world of environmental activism. Millyard has worked on campaigns with Pollution Probe and Friends of the Earth.

The goal was to have Canadian industries choose between adding scrubbers to their smokestacks to remove the sulphur dioxide or switching to cleaner fuels.

"So groups, like the Conservation Council of New Brunswick, were able to just walk down the street and talk to their environment minister and say, 'This is important. It's having an impact on our salmon, on our forests, on our rivers and lakes, and we need to do something about it,'" Corbett said.

"Each group had to campaign in its own province to get that action to happen," Millyard said.

"And then we had to work together on the national stage."

He said that regulations imposed by governments often didn't tell polluters how to improve but simply gave them a five-year deadline.

Inco Ltd., now known as Vale Ltd., actually fundamentally rebuilt its smelter's system, he said, and was dramatically more efficient as a result.

Corbett said credit is due to Canada's engineers, who – after moving through their denial phase – kicked in and helped make the required changes. On the international level, Millyard believes the campaigns were successful because Mulroney and others appealed to the United States' own self interest – showing the damage it would do to the eastern part of the country.

"And the fact that it also kept those Canadians to the north happy, you know, was just sort of a side benefit," he said.

The danger of acid rain acted almost as a primer for larger environmental issues to come, Millyard said. While many of the pollution issues of the day came from local sources, the Maritimes were being polluted by smokestacks in the midwestern United States.

Now, climate change has increased the stakes from a North American problem into a global one. But the last chapter of the acid rain story is still being written, he said, and has been incorporated into the larger conversation about the changing climate.

"We're talking about phasing out coal altogether. That's going to take a little while," he said. For Corbett, the success of the accord comes with two takeaways. First is the importance of never giving up.

The second takeaway was the significance of education campaigns the Conservation Council and other groups held.

Public education played a major role in helping raise the profile of the threat, which helped turn the tide.

"Ordinary people could take a science issue and understand what was going on; who was responsible for causing it and what steps they could take," she said. "Whether it's writing letters to the editor to talking to their young children about it." λ

1 What is the author's tone toward the United States?

A. Self-centred
B. Behind
C. A and B
D. Ignorant

2 What is most likely the reason why actions on Acid Rain, nationally, were committed quickly?

A. It can damage plants, lakes, aquatic organisms, and even infrastructure.

B. It could affect maple syrup supply.

C. The work of the Canadian Coalition on Acid Rain and other organizations.

D. Inspiration from the United States.

3 Why is acid rain not much of a problem as it was before?

A. Due to technological advancements such as scrubbers, they no longer affect the environment.

B. Engineers made changes.

C. Education helped raised the profile of the threat, helping to turn the tide.

D. The 1991 acid rain agreement between Canada and the U.S.

4 Why was an agreement between Canada and the U.S. necessary to combat acid rain?

A. Canada needed U.S's resources.
B. Canada was also being affected by the U.S.
C. A and B.
D. None of the above.

5 According to the author, what is the next step in the process of eliminating acid rain?

A. Adding scrubbers to smokestacks.
B. Sticking with fossil fuels.
C. Striking a deal with the United States.
D. Education campaigns.

6 Create an outline of how changes occurred from the start of the problem to the end.

7 Using information from the text, write a short letter to the United States, taking the role of Prime Minister Mulroney, to discuss creating the 1991 acid rain agreement.

Resilience by nature, Hitting New Brunswick's land and water protection goals

By Hannah Moore

New Brunswickers can all agree that we live in a beautiful province, full of towering trees and magnificent coastal views. Many who live here feel deeply rooted to nature, as it connects us to our families, communities and identities, and sustains the livelihoods of thousands in our working economy.

So why is it that New Brunswick is the worst province in Canada when it comes to protecting our natural landscapes?

A mere 4.6 per cent of New Brunswick is protected right now. That leaves more than 95 per cent of our land, waters and ocean unprotected, leaving vital ecosystems vulnerable to development, climate change and pollution. (Although Prince Edward Island only protects 3.19 per cent, the island is an anomaly, since 90 per cent of land is privately owned.)

Roberta Clowater, executive director of the Canadian Parks and Wilderness Society's New Brunswick Chapter, says our province lacks the right policies to protect the spaces we love and depend upon.
CPAWS, and partner organizations like your Conservation Council, are working to change that.

This summer, CPAWS released its Annual Parks Report, providing a roadmap for federal, provincial and Indigenous governments to work together to achieve Canada's international commitment to protect 17 per cent of our landscape by 2020.

The report, What's Next: Parks and Protected Areas to 2020 and Beyond, highlights New Brunswick's bottom-of-the-pack rankings for land protection, and offers recommendations for how our province can contribute to Canada's conservation goal.

"Protecting land and water is even more important now in this age of climate change," Clowater told the Conservation Council. *"Protected areas provide us with clean air and fresh water, they help protect our communities from climate change impacts like floods and droughts, and they give us much-needed connections to nature — we need to get this right."*

CPAWS' report recommends immediate actions New Brunswick can take to protect up to 10 per cent of the province.

In mid May, Northern Harvest Sea Farms was fined $12,000 for violating New Brunswick's Pesticides Control Act — a sum frustrated fishers in the region, some of whose lobster catch was put at risk by the pesticide use, called *"a slap on the wrist"* and *"the cost of doing business."*

[1] It's the second time in recent years that a New Brunswick aquaculture company admitted to deliberately using an illegal pesticide in the Bay of Fundy. Kelly Cove Salmon, a subsidiary of Cooke Aquaculture, which operates the majority of the roughly 100 open net-pen fish farm sites in the Bay of Fundy, was charged under the Fisheries Act in 2011 for the illegal use of cypermethrin that killed hundreds of lobsters in nearby traps and holding areas. The company was required to pay $500,000 in fines and payments, the largest penalty ever levied under the Fisheries Act in New Brunswick and among the largest ever levied in Canada.

"It makes me seriously worried," Gelfand said of the *"significant deficiencies"* her audit revealed around oversight and enforcement in Atlantic Canada.

Her key findings concluded that: there is a clear lack of enforcement of regulations in Atlantic Canada, where no new enforcement officers have been hired since 2015; the Department of Fisheries and Oceans isn't doing enough to monitor diseases or understand the effect salmon farming has on the health of wild fish; the department isn't doing enough to confirm the accuracy of drug and pesticide reports submitted by aquaculture companies; and there is a clear lack of national standards for nets and anchoring equipment, something critically important in Atlantic Canada where escapes of farmed salmon and interbreeding with declining wild salmon populations happens more frequently.

"I suggest that the department is at risk of being seen to be promoting aquaculture over the protection of wild fish," Gelfand said.

The first low-hanging fruit is expanding protection in the Restigouche watershed, home to one of Eastern Canada's most famous rivers for fishing Atlantic salmon and supporting a variety of other important and iconic species, from moose to the Canada lynx.

The report says expanding protection from its current level at 29,000 hectares to 60,000 hectares would help safeguard one of New Brunswick's most beloved natural treasures and the economic benefits it provides.

The report also recommends upgrading existing management measures in New Brunswick to full protected area status. This would protect areas including peatlands, drinking water watersheds on Crown land, drinking water watersheds owned by municipalities, old growth forest communities and habitats, coastal areas, and provincially-significant wetlands.

"New Brunswickers know climate change is here, happening now, in our communities," said Lois Corbett, executive director of the Conservation Council. "And we know that protecting our land and water is one of the best ways we can ensure the health and safety of our communities in a changing climate.

"CPAWS has given governments, from coast to coast to coast, a smart, science-based pathway to meet this challenge and protect the spaces we love and so desperately need."

1 What is the main purpose of the paragraph with superscript one?

A. To inform the reader of a fine that occurred.

B. To inform the reader of damages that occurred to lobster populations.

C. To inform the reader of the dangerousness of cypermethrin.

D. To inform the reader of the frequency of these events.

2 The term "low-hanging fruit" is an example of?

A. Simile
B. Metaphor
C. Alliteration
D. Allusion

3 Which finding most likely caused Gelfand to conclude the department might be seen to be promoting aquaculture over the protection of wild fish?

A. No new enforcement officers have been hired since 2015.

B. It isn't monitoring diseases.

C. It isn't doing enough to confirm the accuracy of drug and pesticide reports submitted by aquaculture companies.

D. B and C.

4 The four pillars of sustainability are human, social, economic, and environmental. Where would "Aquaculture" most likely fit?

A. Human
B. Social
C. Economic
D. Environmental

5 What would most likely be the very following sentence had the article continued?

A. The government should take heed and work to ameliorate the situation.

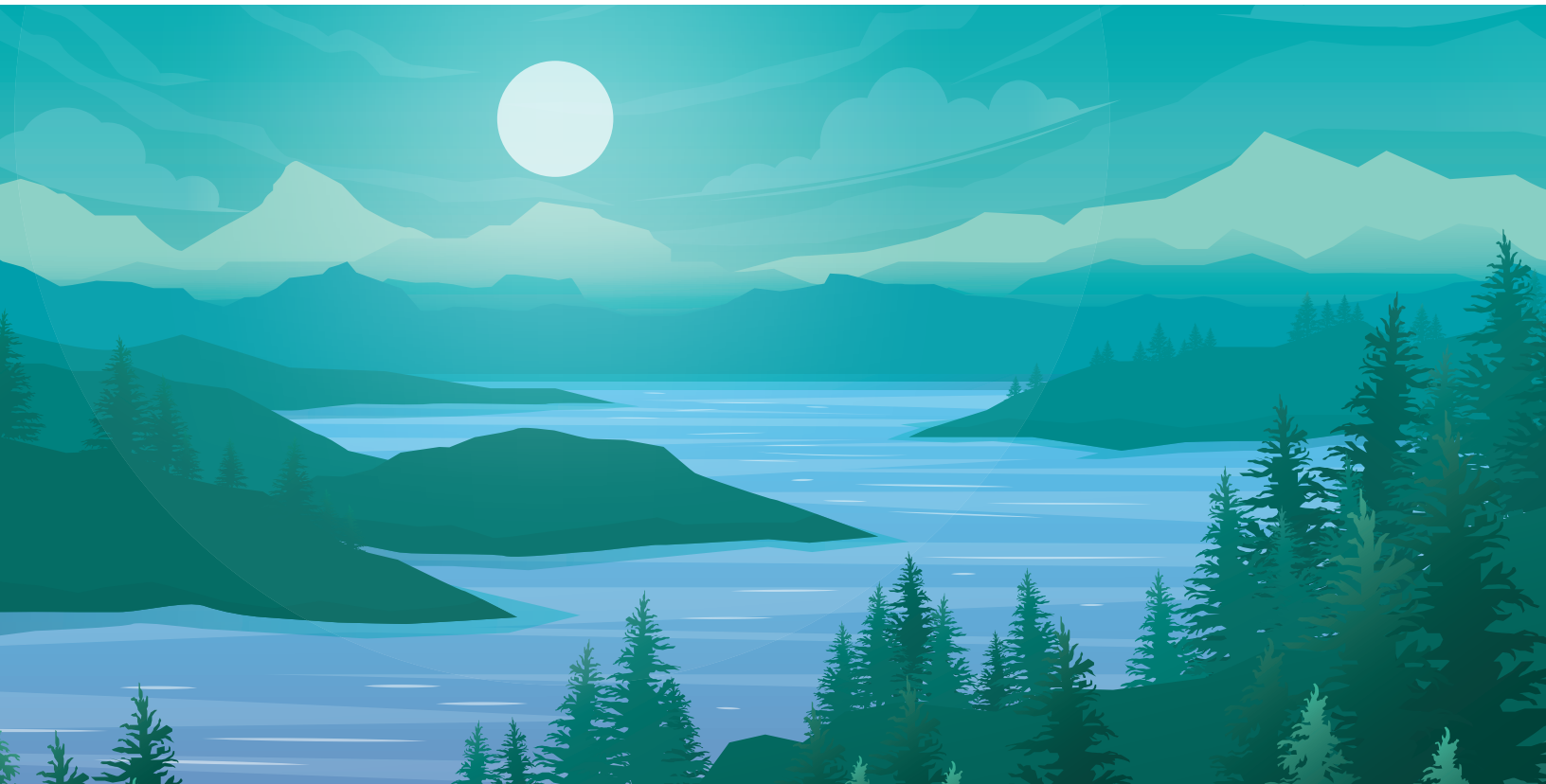
B. The government should have charged Northern Harvest Sea Farms more.

C. The government should erect new national standards for nets and anchoring equipment.

D. The government should not make new changes.

6 Explain the term "the cost of business" and explain its negative ramifications in scenarios as such.

7 Identify the tone of the article and defend it.



The Demand for Clean Energy

By UNB Sustainability

As soon as we created fire, human society had a demand for energy. This has been an important driving force in human history and has only increased as the human population grew. Rising energy consumption levels have, in turn, increased burdens on society to establish more sources of energy. These sources can be categorized into two classes.

The first of these sources is commonly referred to as non-renewable energy. This refers to the energy generated using sources that can be used faster than they are replaced. The most common type of non-renewable energy is generated from fossil fuels (e.g., coal or natural gas). These can take billions of years to form, meaning that the resource is finite. Furthermore, burning these fossil fuels has been proven to create negative ramifications on the environment, such as air pollution and climate change.

The other source is known as renewable energy. Renewable energy is generated from sources that are either not consumed during the process or regenerate quickly, allowing these sources to be used indefinitely. The most common types of renewable energies are wind, solar and hydroelectric. Most renewable energy sources have the advantage of producing little to no waste products during energy generation and are often referred to as clean or green energy. As concern surrounding carbon emissions and climate change increases, society has created a new demand for clean, renewable energy sources to help keep up with the increasing energy demand.

An example of a renewable energy source, the sun, emits enough power onto Earth each second to satisfy the entire human energy demand for over two hours. Therefore, establishing effective methods of harvesting this energy is of great interest, with increased development and implementation, since it is both an abundant and, in principle, pollutant-free method of energy collection. One of the most popular methods for generating electricity from the sun is through the use of solar cells: a method of directly generating electricity from the sunlight without using a generator. But how does this work?

In material with outers electrons that are not tightly bound, incoming light can raise the electron's energy, creating an excited free electron in what is known as the conduction band (CB). This energy input and excitement of an electron leaves a hole with a positive charge, and together, they are known as an electron-hole pair. This hole is then filled by a neighbouring electron hopping into place, resulting in the formation of a new hole. Furthermore, the excited electron now wants to calm down and hops through the material to try and find somewhere to sit with lower energy. Thus, the movement of excited electrons and the filling of holes by neighbouring electrons generate the electric current.

Another hugely abundant source of clean energy is wind energy. The movement of air generates wind energy. Air particles are constantly moving around at high speed resulting in many collisions. As the particles bounce off in all directions, they exert a significant amount of force on a given area. This is referred to as air pressure. An increase or decline in air pressure forms a pressure gradient and is the main driving force of the wind we feel. Advanced technology has helped us develop several techniques to harness large amounts of wind, the most common being wind turbines.

These can be installed on land (onshore) or in large bodies of water (offshore), allowing for the optimum locations for electricity generation. The wind spins propeller-like blades, creating a magnetic field within a generator and thereby generating electrical energy. With the increasing need to diversify energy sources, New Brunswick has created four major wind farms, including Kent Hills and Lameque Wind power LP.

Energy plays an essential role in our lives. It is required to sustain economic and social development across the world. For the reasons mentioned above, it is our responsibility to ensure we meet its growing demand in an environmentally safe manner. Most of the energy we consume is currently generated from fossil fuels, resulting in an increase in global temperatures and biodiversity loss linked to climate change. Therefore, it is time to divert towards clean energy, such as the sun or wind, to help sustain energy in our society for future generations.

1 What is the difference between renewable and non-renewable energy?

i *Non-renewable energy is powered by sources used faster than replenished, while renewable energy is not.*

ii Non-renewable energy is always generated by fossils, while renewable energy is not generated by fossils.

iii *Non-renewable energy has negative ramifications on the environment, and renewable energy sources produce little to no waste.*

A. i only.
B. ii only.
C. ii and iii only.
D. i and iii only.

2 The statement "excited electron now wants to calm down and hops through" is an example of?

A. Metaphor
B. Alliteration
C. Personification
D. Onomatopoeia

3 Which statement best explains why there is a need for diverse energy sources?

A. "As soon as we created fire, human society had a demand for energy."

B. "This has been an important driving force in human history and has only increased as the human population grew."

C. "Rising energy consumption levels have in turn increased burdens on society to establish more sources of energy."

D. "These sources can be categorized into two classes."

4 What drove the advancements in wind energy usage?

A. The need for clean energy
B. Climate Change
C. Technological Advancements
D. Economic Boom

5 What is the purpose of the statement “With the increasing need to diversify energy sources, New Brunswick has created four major wind farms, some of which include Kent Hills and Lameque Wind power LP”?

A. To give real-life examples of changes.

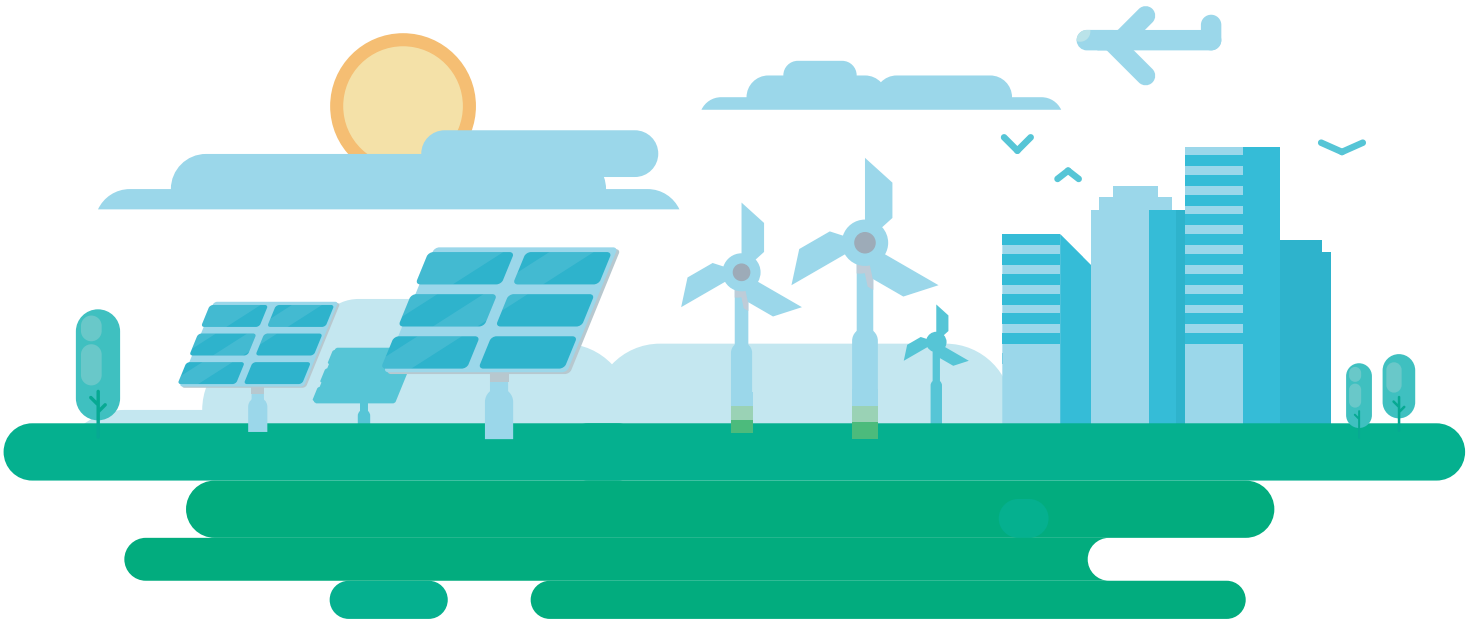
B. To show changes are impossible.

C. To show that New Brunswick is an optimum location for electricity generation.

D. To boast the commitment of New Brunswick.

6 Explain the benefits of wind energy and how it occurs.

7 Create an alternative title for this text, and explain why it would be appropriate.



Moncton Road Salt Management

By Cristina Bolonyi

Road Salt

Snow, as well as coarse ice, is accumulated on the roads during the harsh winter weather conditions. To prevent major loss of any type of vital accidents, road salt or de-icing salt is used. Road salt is a mixture of sodium chloride or otherwise known as table salt and a natural mineral that is used to melt the ice. Road salt, on the other hand, is different from edible table salt because it contains impure minerals that have not been refined for human consumption.

When applied on icy roads and snow, de-icing salt begins lowering the freezing point of ice and snow, delaying the formation and adhesion of ice. Salt is a mineral that dissolves in water and splits into two ions: sodium ion and chloride ion, which scatter water molecules and make re-freezing ice more difficult.

Road Salt in NB

Yearly, the provincial government of New Brunswick buys an estimated 180,000 tones of road salt along with an added supply for schools, hospitals, and municipalities that will purchase de-icing salt through the government's contract. This year, New Brunswick has extended a salt deal from 2019 with Nutrien, a Penobsquis mine which will continue providing potash for New Brunswick roads. The contract with Nutrien has been extended until 2027 by the Higgs government to help to keep jobs in Sussex and promote long-term planning, thus promoting economic recovery and new jobs. The first agreement resulted in the creation of 16 new jobs at the mine, which currently employs 70 people.

Negative Effects of Road Salt

Out of all road salts, chloride-based road salt is the most toxic to the environment, highly impacting the soil, vegetation, aquatic life including ground and surface water. The chloride portion of chloride-based de-icers is difficult to precipitate, is not biodegradable, and does not absorb to the soil surface, posing an environmental risk. Chloride tends to be very mobile.

When applied on roads, chloride salts can be found as far as 10 meters away from the road edge, even though chloride concentrations are greatest within 2-3 meters. This all depends on the soil's solubility. Thus, when absorbed, it will change the chemical properties of the soil and its ability to keep water, affecting plant growth and erosion control. Nature's vegetation will experience symptoms like drought, drying of the leaves, stunted growth, and dying limbs. All because of high concentrations of chloride that allow for it to settle to the bottom of waterbodies and soil that trees and animals consume from.

Aquatic life and surface waters, are greater affected, lowering biodiversity of macro-invertebrates in streams, reducing densities of benthic organisms, and decreased biomass and richness in wetlands. High concentrations of sodium can become lethal to aquatic life because of their high density in comparison to non-salt-containing water, making it sink to the bottom. This disrupts the water/ lake's natural patterns, later affecting animals.

Alternatives

To minimize negative effects on wildlife and the environment, acetate-based de-icers, especially potassium-based or potassium-chloride (potash) if not unavailable are some of the best alternatives. Potassium maintains osmotic pressure and cell size, which helps to sustain and increase soil health, plant growth, and animal nutrition. As a result, photosynthesis and energy output, stomatal opening and carbon dioxide supply, plant turgor, and nutrient translocation are all affected. In that case, the growing plant requires copious amounts of the element. It has been shown that low potassium levels cause several symptoms, including stunted growth, reduced flowering, lower yields, and lower quality produce.

1 What, according to the author, is the main difference between Road salt and table salt?

A. Table salt, contrary to road salt, is unable to melt ice.

B. Road salt is a mixture of sodium chloride, contrary to table salt.

C. Road salt, contrary to table salt, is edible.

D. Table salt, contrary to road salt, is composed of impure minerals.

2 The best synonym for the word "lethal" is?

A. Malnourished

B. Harmful

C. Severe

D. Mortal

3 Where would this article most likely be found?

A. A science textbook
B. A magazine
C. A newspaper
D. A blog

4 Which sentence best describes the main idea of the section "negative effects of road salt?"

A. "Thus, when absorbed, it will change the chemical properties of the soil and its ability to keep water, affecting plant growth and erosion control."

B. "Aquatic life and surface waters, are greater affected, lowering biodiversity of macro-invertebrates in streams."

C. "High concentrations of sodium can become lethal to aquatic life because of their high density in comparison to non-salt-containing water."

D. "Out of all road salts, chloride-based road salt is the most toxic to the environment."

5 If the author chose to expand upon this article, the best section to include would be?

A. Cost effective implementations of acetate-based de-icers.

B. The necessity of de-icers.

C. The chemical compounds of different de-icers.

D. Effects of too high potassium levels.

6 Explain why the author chose to write in this specific tone.

7 Write a letter to a government official explaining the necessity of switching to acetate-based road salt.

Dead Zones: No Fish's Sea

By Junella Zhang

During the past several decades, a fish out of water is no longer a marine animal's only concern. Besides overfishing and heavily polluting each of the Earth's seven oceans, humans have in recent years created massive expanses of uninhabitable territory for fish, in their very own ecosystem, quite literally known as 'dead zones'. As the name suggests, these regions are known for viciously axing down the number of fish, marine mammals, and even shore birds that dwell nearby.

The existence of dead zones can be generously attributed to eutrophication, the man-induced process of oceans receiving an excess of nutrients such as phosphorus and nitrogen. When fertilizers containing said chemicals escape into waterways, whether due to rainfall or irrigation, the nutrients previously meant for land plants (embryophytes) now poison fish and become feed for aquatic vegetation. In the case of the former, biomagnification occurs such that the same poison digested by a phytoplankton might be found in the belly of a baleen whale twenty-four hours later— except this very whale has likely consumed not one but up to 4% of its body weight in poisoned plankton. Either the whale is eaten by predators, in which case the poison is then bequeathed to other fish, or it accumulates enough poison in its system that it meets its demise.

Dead zones are created by the latter of the two possible consequences of eutrophication: explosive algae growth. Because of the overabundance of afore- mentioned nutrients, algae are likely to overpopulate the affected area to the point where they quench any hope of marine animals coexisting with them. Like most plants, algae bloom toward sunlight, resulting in their instinctive journey upward to the surface of the water. If they were to become outrageous in number, a canopy of algae may form above other aquatic vegetation and prevent sunlight from reaching beyond the surface.

Alternatively, excessive algae can exhaust the oxygen in water and therefore create an inhospitable environment for fish, which, contrary to a perhaps intuitive belief, require oxygen to survive. Due to the hypoxia, fish within the area are prone to reproductive problems such as reduction in size of reproductive organs and fewer offspring and, of course, death. Other notable causes of eutrophication include animal agriculture, where the improper disposal of manure introduces yet another source of nutrients for algae that eventually make their way into waterways, as well as sewage and industrial waste discharge, which carries high amounts of chemical nutrients.

While most are irreversible or relapse seasonally, there have been the occasional reversible dead zone. Despite housing what was considered as the world's largest dead zone prior to the 1990s, the Black Sea, situated between Europe and Asia, was indeliberately restored following the downfall of the Soviet Union. Fertilizers saw a huge increase in cost and were thereby largely abandoned, which inadvertently led to the Black Sea's recovery from previous degradation. Countries around the world then began to avail themselves of the evidence this serendipity provided of the possibility of restoring dead zones, and to this day continue to combat the expansion of existing dead zones and the formation of new ones.

Although numerous daunting obstacles hamper the curtailment of dead zones, such as natural disasters and unintentional oil spills, there exists little meaning in wallowing in the face of deterrents. This may be an uphill battle, but it is one Sisyphus admires; as long as man continues working toward a cleaner earth, he shall not find the boulder at the bottom of the mountain once more.

1 What is the tone of the author in the first paragraph?

A. Dismissive
B. Happy
C. Dejected
D. Unhappy

2 The purpose of the second paragraph is?

A. To inform the reader of the cause and consequence of the biomagnification process.

B. To inform the reader of the cause and consequences of eutrophication.

C. To enrage the reader.

D. To encourage the reader to advocate against eutrophication.

3 What is the most likely definition of the word hypoxia?

A. Inability to breathe
B. Inability to swim
C. A reproductive disease
D. A toxic chemical compound

4 What is false about biomagnification?

A. Biomagnification occurs through the transmission of poison from prey to predators.

B. Biomagnification, directly, is unable to kill its victim.

C. Baleen whales are one of the victims of biomagnification.

D. A Baleen whale could have 3% of its body weight poisoned.

5 The story of Sisyphus is an example of?

A. Simile
B. Metaphor
C. Allusion
D. Alliteration

6 What is the author's purpose in using the word "axing" in the first paragraph?

7 How did the fall of the Soviet Union affect the dead zone in the black sea? What environmental advantages may have occurred through the reversing?

An excerpt of

Do You Have Nature Deficit Disorder?

How One New Brunswick School Attempted to Solve the Problem

By Natalie Gillis and Michael Fox

Why do we spend so much time sitting in a classroom, even when we are learning about the natural world that is right outside our door? An increasing amount of academic literature has documented a growing disconnect between youth and the outdoor/natural world, particularly when it comes to their formal education. This disconnect has been called ***"Nature Deficit Disorder"*** (NDD), a term developed by journalist and author Richard Louv, that highlights the importance of interaction with the natural world for a person's health, development, and well-being, as well as environmental sensitivity and responsibility. Using a New Brunswick-based case study, we argue that outdoor learning facilities and environmental education at our schools can combat the detrimental effects of NDD. To combat NDD by increasing student interactions with the natural world, a community-based partnership was developed and implemented through the creation of an outdoor learning facility and outdoor education program at Salem Elementary School in Sackville, NB.

Nature Deficit Disorder (NDD)

Children spend a significant portion of their day in schools, and these institutions are meant to teach the skills and tools necessary for life, including intrinsic values beyond that of the curriculum. Therefore, education that fails to adequately teach children about the natural world or even provide them with the opportunity to spend time outdoors, contributes greatly to the development of NDD in children. The implications and consequences of NDD span many facets of well-being, including social, physiological, and physical health. Beyond personal well-being, we also need to have our youth connect with the massive set of global environmental issues that they have been born into and how they can learn and connect with the health of the planet, including climate change, sea-level rise, species at risk, and so many other issues within the context of their own education and in their communities. We need to get outside for all of this!

The typical experiences for students in our schools have been described by Louv as less than nature-friendly. He argues that North American schools are increasingly focused on test scores and academic performance and on subjects such as math and science and standardized materials. Research addressing this lack of connection to creating sustainable communities are calling for increased *"learning by doing"*, or experiential education, which has dramatically declined in schools in the past years. Not only the curriculum, but the actual structure of classes, encourages children to sit at desks for hours a day, learning little about the specific environment around them, which unfortunately may be limited to PowerPoint presentations, over-heated classrooms, manicured grass fields and asphalt playgrounds. This lack of interaction with diverse ecological systems creates a disconnect between the science and citizenship they are learning and the real world.

Furthermore, according to Louv, youth are spending approximately 95 per cent of their days indoors and approximately 40 per cent of their days in front of some form of screen such as televisions, computers, smartphones, or tablets. Such activities not only reduce time spent outdoors, they tend to send detrimental messages about nature. Studies have linked increased screen time to a variety of long-term health, emotional, and cognitive development consequences and a lack of understanding and respect for environmental systems. The American Academy of Pediatrics (AAP) and the Canadian Pediatric Society (CPS) have recommended that youth aged fourteen and below should have their screen time limited to no more than two hours per day (Lipnowski and LeBlanc). Reports have demonstrated that children, as they grow older, increase their time spent participating in sedentary lifestyle activities, supporting the need to reduce screen time at an early age (Basterfield et al.).

The media also contributes to NDD by misleading people into thinking that outdoor environments are unsafe. The data over time does not suggest that there has been an increase in abductions or serious injury—yet the frequent media reports of individual cases lead adults to believe it is better to keep children indoors for safety reasons despite the benefits of children being outdoors. Furthermore, the media portrays the natural world itself as a dangerous and scary place. As Louv has demonstrated, even educational material about the natural world is usually chosen because it is dramatic and extreme.

Spending increased amounts of time indoors has been shown to have physical health implications. One of the most worrying findings is that NDD can contribute to the high rate of childhood obesity. The World Health Organization (WHO) has reported that globally over 42 million children under the age of five were classified as overweight in 2010. In a 2012 report, the province of New Brunswick indicated that 24.0% of youth aged twelve to seventeen are overweight or obese, which was the highest rate in the country. According to Kuo,

> *[E]nvironments with less green are associated with greater rates of childhood obesity, higher rates of 15 out of 24 categories of physician-diagnosed diseases, including cardiovascular diseases; and higher rates of mortality in younger and older adults (4).*

Although organized sports are now common for children, they cannot compensate for *"couch-potato lifestyles"* (Louv). It is argued that children need to spend more time outdoors, not involved in organized sports. Time spent running, biking, or exploring nature reduces the electronic screen time and combats some of the negative effects of NDD including low health scores.

Spending time outdoors has other benefits for physical health:

> *[g]reener environments enhance recovery from surgery, enable and support higher levels of physical activity, improve immune system functioning, help diabetics achieved healthier blood glucose levels and improve functional health status and independent living skills among older adults (Kuo 4)*

NDD can also affect mental health. Researchers have identified parallels between humans who lack interactions with nature and animals in unfit habitats. Specifically, humans in unfit habitats, like animals, increase antisocial behaviour and decrease prosocial behaviour (Kuo). Studies comparing people who have more access to parks and green spaces with those with less access have demonstrated clear differences in social, physical, and physiological health. Kuo noted that individuals who lack interactions with the natural world suffer from increased sadness, higher rates of clinical depression, and the symptoms of attention deficit/hyperactivity disorders, while also being more prone to anxiety and stress.

1 What factors affect the development of NDD in children?

A. Being uneducated
B. Not engaging with nature
C. A and B
D. None of the above

2 What is not a problem within the modern school system listed by the author?

A. It contributes to the development of NDD in children.

B. It focuses on experiential education.

C. It increases the time students spend inside.

D. It fails to connect youth with global environmental issues.

3 What might have been the main cause of declination of learning by doing?

A. Technological Advancements
B. Organized Sports
C. Academic Pressure
D. Climate Change

4 Which statement would the authors most likely agree with?

A. Electronics should never be given to children and youth.

B. Environment, when presented, is primarily chosen to invoke emotion.

C. Organized sports do not have any benefits.

D. NDD may influence individuals to be more independent.

5 What group of people would most likely read this?

A. Parents
B. Scientists
C. Youths
D. Journalists

6 What is most likely the purpose of this essay, according to this excerpt?

7 Create an alternative introduction for the section Nature Deficit Disorder and defend it.

Ions, eons and a journey through time

By Lane Macintosh

Waterfalls, mountains and beaches. When we're near them, we feel good. At least I do – waterfalls especially. Watching water tumble over rocks and listening to the music it makes on its journey to the sea nourishes the spirit. Like currents of thought in the slipstream of time, history travels with it.

That's what I was thinking last spring as I stood beside Eel River Falls after a short mountain bike ride from the village of Benton, one of my first adventures *"out on the land"* last spring. A bike ride along the old railway line into the falls as soon as the mud clears up will be an excellent launch to another summer of mountain biking.

It's the negative ion molecules that give us positive vibes when we breathe deeply in certain environments. Once the negative ions reach our bloodstream, biochemical reactions increase serotonin levels, helping relieve stress and boost energy.

But it wasn't just the negative ions giving me those pleasant feelings last spring. It was also the eons of human history that have unfolded at Eel River Falls and all along the Eel River and the rest of the ancient waterway known as the Maliseet Trail.

And it was my history with the Eel River, too, including sharing a campfire in June 1994 with two Maliseet friends, Patrick Polchies and Martin Paul, on the first night of their week-long journey along the ancient waterway to Old Town, Maine. Our friend, Dr. David Keenlyside, field archaeologist with the Museum of Civilization in Ottawa at the time, was also there.

With his depth of knowledge about the Indigenous people of Eastern North America, David, my canoe partner on that first day, was great to have along. Our task was to paddle down the river towards Patrick and Martin (the Eel flows into the St. John River at Meductic), who were paddling upriver and spend the first night with them. For the rest of the trip, they were on their own.

As we paddled, David explained that the Eel River and the rest of the Maliseet Trail played a significant role in the cultural development of the Maritimes and New England. For millennia, Indigenous peoples, including Wolastoqiyik (the Maliseet), travelled this ancient trail that connected Wolastoq (the St. John River) with the Penobscot River in Maine. When Caesar ruled Rome, Indigenous peoples were travelling this route.

In his book, Someone Before Us (Brunswick Press, 1968), the noted New Brunswick author, Dr. George Frederick Clarke, writes: *"This system of waterways and relatively short portages, had been used from time immemorial both from and to the St. John River, but the Penobscot and Kennebec route was to become of vital importance in those stirring years when French and English struggled for mastery in the New World: a period when the Indian village, fort and portage at Medoctec became famous in the annals of both peoples."*

Experiencing the Maliseet Trail with people whose connection with the land goes back millennia was humbling. I recall how deeply moved Patrick and Martin were as they shared with us in the glow of the campfire how honoured they felt to trace the sacred steps and paddle strokes of their forbears.

[1] As have others who have travelled the ancient trail over the centuries, my friends will discover footsteps worn into stone by the moccasins of their ancestors on their journey through time. When they make this discovery and others, they will honour their ancestors by offering tobacco and sweetgrass to attract good spirits and positive energy.

Good spirits and positive energy. That's what I'm feeling now as I think about that long ago campfire beside the Eel River and my visit last spring to the falls that bears its name. I'm looking forward to seeing it again and watching water tumble over rocks. I'm also looking forward to listening quietly to the music it makes on its journey to the sea. Like currents of thought in the slipstream of time, history travels with it.

1 How many people do the group travel with?

A. 2
B. 3
C. 4
D. 5

2 What is not true of the Maliseet Trail?

A. A passage used by the Indigenous people for millennia.

B. A critical road connecting the Wolastoq to the Penobscot River.

C. Forsaken in present day.

D. A trail with ancient traces embedded.

3 What is most likely the narrator's opinions toward Indigenous traditions?

A. Exciting
B. Revering
C. Entertaining
D. Sorrowful

4 The best antonym for immemorial in this situation is?

A. New
B. Countable
C. Old
D. Uncountable

5 The phrase "the music it makes on its journey to the sea" is most likely alluding to?

A. The memories of ancient aboriginal people's singing.

B. The natural sounds of the river.

C. The music the narrator is listening to with electronics.

D. The singing of his group members.

6 Who would most likely be interested in this text?

7 Explain the significance and meaning of the title.

Farther Down the Road

By Cassidy Palmores

The last summer had been so hot. The sun had beaten down on their backs as they trudged forward down the path while their feet kicked up dust on the dry earth. As they walked, it seemed the flowers shriveled to stiff greyish stalks in the time took to take one step forward. One eye was always kept on the distance, watching for the heavy rain clouds that could come and pour down their wrath on the loose earth at any moment.

And when they came it was no telling how long they'd last.

Rain would bring up the mud from the dirt, batter their backs, slow their feet, rattle their brains inside their skulls. But they kept walking forward.

Another eye was kept on the shoreline, off in the other direction from the mountains down which the storms would roll. Salt made the water an unwelcome feature, one that would sting their eyes and burn their throats.

But his grandmother had said when she was a girl, she hadn't been able to see the sea.

Not because they had gotten closer to it, but because since then, it had gotten closer to them.

The sea was coming, creeping, ready to roll them up in a deadly wave right through a storm.

One day the saltwater would soak their shoes and scorch the blisters that rubbed their heels from walking and walking and walking.

"We cannot go down this road." He said to his father. *"It will become too dangerous."* He said. "There must be another way."

Every winter he could remember had been colder than the last. The winds had howled louder and frozen their bones more deeply in their flesh. One winter, farther down the road, it would just be too cold.

"We will keep walking." His father had decided. *"If one day it is too cold, then we will find a way to be warmer. And if one day it rains too hard, we will build ourselves up to withstand it."*

"It is foolish." The son said. "*We do not have to keep walking down this road. We can find another way."*

One summer, farther down the road, it would just be too hot. The only water would be the salt that could not quench their thirst, that only added to the sweat that rolled down their brows and turned to sludge when it hit the ground or was simply washed away with the rest of the waves that had finally caught up with their heels.

One day, farther down the road, the air would be too heavy to breathe. Each breath would be a herculean effort to draw just enough oxygen to take a step forward. One night they would not be able to sleep for the rain pattering on their heads, or the water rushing their beds.

"There is no reason we must go this way." He tried to argue. *"We can turn back. We can go somewhere else. We can get there some other way. But this way is not worth it."*

No one listened to his pleas.

"You might not make it far enough to see it," he said, *"but I will. And you cannot leave me in the sun, the wind, the rain, the water, alone to drown and suffocate and starve."*

His father continued on.

"We all must go back." He pleaded. *"You must turn back with me!"* He looked down at his own child. *"With us."*

"Come on. We're almost there." His father said. *"It's just a little farther down this road."*

1 Who is the main protagonist of the story?

A. The Father
B. The Grandmother
C. The son
D. An unknown individual

2 Why is the family able to see the sea now?

A. The family is walking a road toward the sea.

B. The sea is approaching them.

C. The weather is clearer.

D. The sea is a metaphor for water pools appearing because of the storm.

3 Why does the protagonist argue to turn back?

A. There will be a storm.
B. There would only be undrinkable water.
C. The road would have severe consequences.
D. A and B.

4 Which word best describes the Dad's mindset in the first half of the story?

A. Reflective
B. Innovative
C. Untroubled
D. Careless

5 The word that best describes the father's tone in the second half of the story is?

A. Encouraging
B. Indifferent
C. Confused
D. Irritated

6 What is the moral message of this story?

7 Using quotes, create an alternative title for this short story, and explain why.

An accidental encounter that led me to the Serengeti

By Vanessa Paesani

As I was sitting in my cramped airplane seat on my way back to Moncton from southeast Asia - specifically Kuala Lumpur in Malaysia - a strange sensation came over me. I got the sense that I was going to run into my friend Jeff at the next airport. I'd experienced a few of these moments before - I'm not sure what to call them, whether premonitions or deja vu or something else. Jeff travelled a lot, so it wasn't out of the realm of possibility that I would run into him; however, the odds of running into someone you know at a large international airport on a specific day and time seemed pretty low. I went back to my reading.

A few cramped hours later, the plane landed in the Montreal airport. We were late, and I didn't have much time to cross customs and get to my gate before I'd miss my next flight - I was exhausted, it was late at night, and I definitely did NOT want to miss that flight. After making it through customs without incident, I found myself running to my gate - and as I was running on one of those human conveyor belts, I saw a man running up ahead of me. It looked like Jeff. Weird.

As I arrived at the gate, sweaty from running with the pack that carried the few items I had travelled with for the past 2 months, I saw two pieces of good news. First - the flight was delayed (nothing new for Montreal winters!) which meant that I didn't miss it, and it was indeed my buddy Jeff who had been running for the same flight that I had.

We got to chatting and catching up. Jeff is a long-time entrepreneur and is currently building a large social-impact tech company with offices in Atlantic Canada, in the USA, and primarily in east Africa. Their company allows people to rent rechargeable, solar-powered batteries to use to charge their phones and run small things like lights in homes. This is especially impactful in places that are beyond the electrical grid. Living somewhere without access to steady, reliable electricity is something that's hard to fathom here in NB since we have access to it any time we want it. Can you imagine not being able to charge your cell phone or devices when you want to?!

Jeff told me about a piece of work that he knew was coming up - it would be working with a charity he helped start whose mission is to help protect and restore forests, support communities in their adaptation to climate change, build economic prosperity, and champion social equality. They were seeking consultants to help them build a gender-responsive business curriculum in Zanzibar, which is in Tanzania. I'm a teacher by training and have done work in diversity, equity and inclusion - the work of levelling the playing field for people that experience systemic oppression. Jeff suggested I get in touch with them to see if I was interested in the work. I was definitely interested.

Finally, the plane was ready to board, and we tiredly boarded the flight to head home. I followed up with his colleagues when I got home, applied for the role, and managed to get the contract. I was off to Tanzania!

The work was beautiful and hard. We were building a curriculum based on the work the local organization had already been delivering to help people more quickly become smallholder farmers. The island we were working on had many crops, and I remember at one client's home, they hosted us for a lunch of coconut-cooked cassava from their gardens and tea from the spices they grew. Spices such as vanilla are a very important crop on that particular island, and recently a few farmers had secured a contract with Lush Cosmetics to sell them their organic vanilla. It was the best tea I had ever tasted because everything was so fresh. It was an honour to sit in their home as a guest from halfway around the world and drink tea made from spices grown on their land. I felt so present and grateful at that moment.

Once I completed the work, I had booked a safari to the Serengeti, which was a place I had wanted to experience for as long as I could remember. I've always loved being outside - it's when I'm happiest - and have always been intrigued by how ecosystems work. After I graduated high school, my first degree was in biology. I loved learning about ecosystems and how so many different types of life are able to live in harmony with one another. While I didn't stay in science, I've taken all of the things I've learned about ecosystems and nature into the work I do now in social finance - how money can be used to create a social impact in the world.

The Serengeti was a surreal experience. It was a spiritual trip. I didn't just see lions, zebras and giraffes up close. It felt like coming home. It felt like the ecosystem was living in harmony. The Serengeti is a 30,000 square kilometre protected area. I've never been a fan of zoos - the animals always seem depressed and lonely. The last one I went to was the Boston Aquarium, and I left there feeling sad and lonely myself. In the Seregenti, the animals were living as they were meant to.

There were hunters; there were herbivores; some travelled alone; some travelled in groups like the many elephants I saw. I know not everyone will be able to experience the Seregenti or something like it in person in their lifetimes. However, I don't think you need to. I realized I have similar experiences here in New Brunswick all of the time.

In New Brunswick, we are lucky to have so much land and beauty just outside of our doors. I walk my dog in the parks every evening, and he spends the entire time smelling every scent on every plant - I walk with my eyes, and he walks with his nose. Walking with him reminds me that there is much more to the world than the human senses. I go to the ocean outside of Cap-Pele and marvel at the vastness of the ocean - it's so vast it's hard to comprehend. I never feel calmer than when I am in nature. And if you don't want to leave your house, or can't, the world of film has brought nature to our living rooms. The many series Sir David Attenborough and his teams have put together are nothing short of miracles - Planet Earth, Blue Planet, A Perfect Planet - among many, many others produced by him and many, many others. Even Zac Efron released a great series on Netflix called, Down to Earth.

I believe we are part of nature, not separate from it. We can observe it, and more importantly, we can experience it. Be part of it. That's where the magic is.

1 Why was the narrator taking a plane ride to Moncton.

A. She was going back home.

B. She was looking for a new job.

C. She was planning to meet Jeff.

D. She had a dream about taking the plane ride.

2 What was Jeff's occupation?

A. A marketing person for a charity.

B. An entrepreneur building a tech company.

C. A professional traveller.

D. An employee of a charity.

3 Why did the narrator feel sad and lonely after leaving the zoo?

A. She did not want to leave Boston.

B. The zoo paled in comparison to the Seregenti.

C. The animals looked unhappy.

D. The zoo lacked animals.

4 What did the narrator's new occupation involve?

A. Rescuing Animals

B. Planting Trees

C. Creating a curriculum

D. Working as a forest ranger

5 What was the purpose of comparing Serengeti to New Brunswick?

A. To outline the stark difference of exotic nature .

B. To remind the reader of New Brunswick's nature.

C. To compare the free animals versus encaged animals.

D. To identify different environmental aspects in New Brunswick.

6 How was the narrator influenced by the plane ride?

7 In a paragraph, identify how this piece influenced your opinion on New Brunswick's environment.

Drowned Mouse In A Cup

By David Oh

It had been the wrong day for a shoreline clean-up. The winds blew viciously, ballooning up the plastic garbage bags like pufferfishes, attempting to wrench them away from our grips. Nonetheless, with my too-large Dollarama gloves, I was scrunched down, gathering the litter.

It was during my toils that a guy approached me murmuring a quaint phrase. I thought he could have said, *"do you want a drowned mouse in a cup?"* But I wholeheartedly doubted that; typically such alignment of words was not spoken, and also the words had died in the deafening winds, who offered no assistances to my rather inadequate hearing.

"Pardon me?" I courteously replied, carefully eying the plastic cup in his hand, and to that, he replied, *"come see the drowned mouse in a cup."*

Confused, I complied. After dropping my bag of cigarette butts, I approached for a better look at the *"drowned mouse in a cup."* To my surprise, his words had spoken true. In a clear plastic half-filled cup, there was a little mouse pup drowned in muddy water. It took me a moment to absorb the figure – to comprehend it fully. The corpse was performing a pitiful parody, acting as a bobbling rubber duck – floating up and down, left and right, lifeless. I could not tear my eyes away, even when a grim realization formed within me.

Someone, probably without a second thought, carelessly threw away that cup, casting it away – willfully blind to the possible consequences. But that very same cup intruded the mouse's ecosystem then trapped it - killing it. As I continued observing it, those lifeless blank eyes recounted me a melancholy tale. I could see the terror in the small pup's eyes as it scratched, writhed, trying to escape its confinement – trying not to drown. But then, the terror melted into despair, and I saw it slowly succumbing; the water ladened its legs, carrying it down, and the sky disarrayed into a blur of colours.

In response, it would splutter, spitting out the water, the intense fear and panic giving it slightly more energy, but even death could not lift its legs, and it died. The mother mouse would come later, screech a heart wrenching cry, trying to find its lost pup, the one it nursed, watched it mewl, and then it saw the dead corpse trapped in the translucent cell. Perhaps after a bird would come later as well. The predator would have eaten the prey, as it was inscribed in laws of nature, but the bird would not be able to eat the quickly rotting corpse, even if it could access it. So then it would fly away, hungry; after all its preys were scarce due to the disappearing habitats. Thanks to us, humans after all...

As the guy walked on, offering the dead pup and its cell, it exemplified for me the damage we were causing. It was this moment that inspired me to walk over, to see how much more work was left. I hopped down onto the pavement, (see we were working in a strip of grass between a parking lot for a small mall and a river) and just walked by the curb, examining the amount of litter. To my disdain, my guess had been right, we had not even made a dent.

With a little sigh and an ignited determination, I plopped down and begun collecting the litter yet once more. And during then, I remembered a message I heard from Carlos Whittaker. Through his book, Kill the Spider: Getting Rid of What's Really Holding You Back, has nothing to do with the environment, his message could be translated here. Kill the spider making the web, not the web itself. The web will continue coming back if the spider is still alive. Looking at the litter multitudinous in number, the cigarette butts who outnumbered ants, and my dedication, but so seemingly futile efforts, the quote seems like the sole verity. We, as a society, have to kill the spider, and then perhaps then, there would be no more *"drowned mouse in a cup."*

1 What was the narrator doing before the guy approached him?

A. Collecting litter
B. Planting Trees
C. Blowing balloons
D. Examining a mouse

2 What point of view is the story told from?

A. First person
B. Second person
C. Third person
D. None of the above

3 What is the most likely definition of ladened?

A. Shackled
B. Weighed
C. Weakened
D. Slowing

4 The term translucent cell is an example of?

A. Alliteration
B. Simile
C. Metaphor
D. Hyperbole

5 The primary purpose of the text is to

A. Encourage individuals to *"kill the spider."*
B. Retell a story that happened to the narrator.
C. Exemplify harmful effects of litter to the environment.
D. To express the author's disdain toward litter.

6 Identify the tone of this story and defend it.

7 In a short paragraph explain what is the "spider" and what "killing the spider" may appear like.

Luna

By Cory Herc

I think of being nine years old in the thick, dark air of summer over the point where the Wolastoq and the Kennebecasis meet - the tide is gently rolling out, and moonlight dances over water, moving like a beckoning hand to the wan porchlight behind me, calling the humming incandescent bulb to join its father in the wine-dark sky. I think of me, nine years old, sitting on the front patio at the wooden cottage, built on stilts like everything down that peninsula, in defiance of the raging waters that come with the spring freshet, the river like a bear waking from its slumber under receding snow at winter's end, the river like a sunrise cresting after the darkest night. I look at the porchlight, the pale ghost of moonlight, and the cloud of months, dozens if not hundreds, flocking to it like they had never seen such glory in their brief lives and could only hope to be close to something so beautiful.

I think of me, twenty-five years ago, waking to the sunrise and seeing a great spread of green splashed on the outside wall - a moth the size of my young hand if not larger, wings folded in dormancy, resting securely for all the world to see. Stunned and entranced, I watch it like the moths watched the porchlight like the porchlight watched the moon, and the moon the water. I think of myself, shown a single beautiful thing in the world, and shocked at its existence as if there were no such other beauties even though I walked across the frozen water in the cove at four, canoed to secret beaches and waded a mile out and a mile back through reeds just for a glimpse at the corner store in Grand Bay that sold penny candy, fireworks, and hamburger buns to the campground down the road.

'I think of the stark black spots on its wings, like eyes watching me back as it slept, keeping watch over the rippling waves below and gazing lidless as the sun rose and set again while it waited for the call of the moon to bring it back to awakeness for its brief dance with the night sky.

I think of myself at thirty-four and can't recall the last time I saw a luna moth since then - the image of its lime-green splendour in the dawn's cold light burned into the walls of the back rooms of my memory, never replaced with another memory. I think of myself, holding a mug of black tea, pen in hand as I write letters to remind my distant friends that I love them, and think that I have seen them more recently than the luna, that in spite of every visit to the land at the tip of the peninsula each summer, the green splash on the wooden boards remains elusive. I think of myself, nine, imagining a future where the world was so small and where I was a discoverer of new things within it, always expanding into the unmapped spaces beyond the borders of what was known, and then at thirty-four, at the end of a day, at home remembering moonlight beckoning to a lightbulb, and a lightbulb beckoning to moths, and the moth beckoning to me, and then for it in turn to live on in a sheltered corner of my memories waiting, like a timeless cocoon with no known time to hatch.

1 The "father" in the first paragraph is most likely alluding to?

A. The Christian God
B. The narrator's Dad
C. The moon
D. The stars

2 Identify one example for three different types of figurative language found in the text.

i.

ii.

iii.

3 What is the main purpose of the second paragraph?

A. To recall a happy memory.

B. To explain the splendor of the moth.

C. To explain the different activities the author did prior.

D. To give a physical description of the moth.

4 The author uses figurative language to?

A. Provide a physical description for the reader to visualize.

B. Present the facts in a clear manner.

C. Create a fancy atmosphere.

D. Give the text more warmth.

5 The tone of the final paragraph is most likely?

A. Regretful
B. Worried
C. Emotional
D. Sorrowed

6 Describe the physical appearance of the moth.

7 Imagine you are the nine year old author, and using figurative language describe the emotions you feel.

Radio Weather

Shoshanna Wingate

When there should be snow there is rain, rain,
rain, then ice, then rain. The radio hosts asks

call-in listeners if they think this a sign
of climate change. Old timers hit speed dial,

side-step the point, eager to talk storms,
lives marked by weather, recall jumping out

of windows when the doors were blocked with
snow,
the hospitals filled up with broken backs--

What does it mean? The questions gather. Oh,

I have another story, a good one.
This storm flooded the town then froze it in

its shell; each home a snow globe of its own.
That one felled trees older than most houses;

rain pummeled us for days until the roads
gave way, just buckled, the ground beneath us

heaved and upended, water everywhere
devouring the road as if it were a sandcastle;

took bridges too, whole town unglued, adrift,
now islands of their own. Weather serves up

memory better than any book.
Who likes to think about means and ends,

how things change so slowly until they snap?
We fear our maps outdated, pencil sketches

on onion skin. Our stories, though,
tell us who we are.

Shoshanna Wingate, Radio Weather, 2014

1 The second story can be best described as?

A. Hyperbole
B. Understatement
C. Simile
D. Metaphor

2 When the poet states: “who likes to think about means and ends, how things change so slowly until they snap?” What is she foretelling?

A. Time breaks everything.
B. The world is going to end.
C. Climate change will end the world.
D. There is a limit to the amount of change the Earth can handle.

3 The best example of metaphor found in this text is?

A. “Each home a snow globe of its own.”
B. “As if it were a sandcastle.”
C. “Trees older than most houses”
D. "Rain pummeled us for days"

4 The text mentions the word onion skin; what would it most likely mean?

5 “Our stories, though, tell us who we are.” Is the last sentence of the poem. What is the purpose of this statement?

Patient is Earth

Marilyn Lerch

Patient is Earth beyond the tide of human
time, absorbent to its core of blood,
all interstices of air and water befouled,
but one day it will have had enough and we
ourselves will wish for death confessing
to every blighted tree and strangled bird,
to every stranger deemed an enemy that
we never learned to live beyond our skin,
lose and find our selves in Life's dominion,
and when the gathering deluge finally breaks
or planetary cold delivers us to sleep,
or the great conflagration is at the door,
we'll weep to hear the poet still at work
singing our demise in mournful metaphor.

1 What does interstice most likely mean?

A. Space
B. Matter
C. Intertwinement
D. Sickness

2 What does "tide of human" most likely mean?

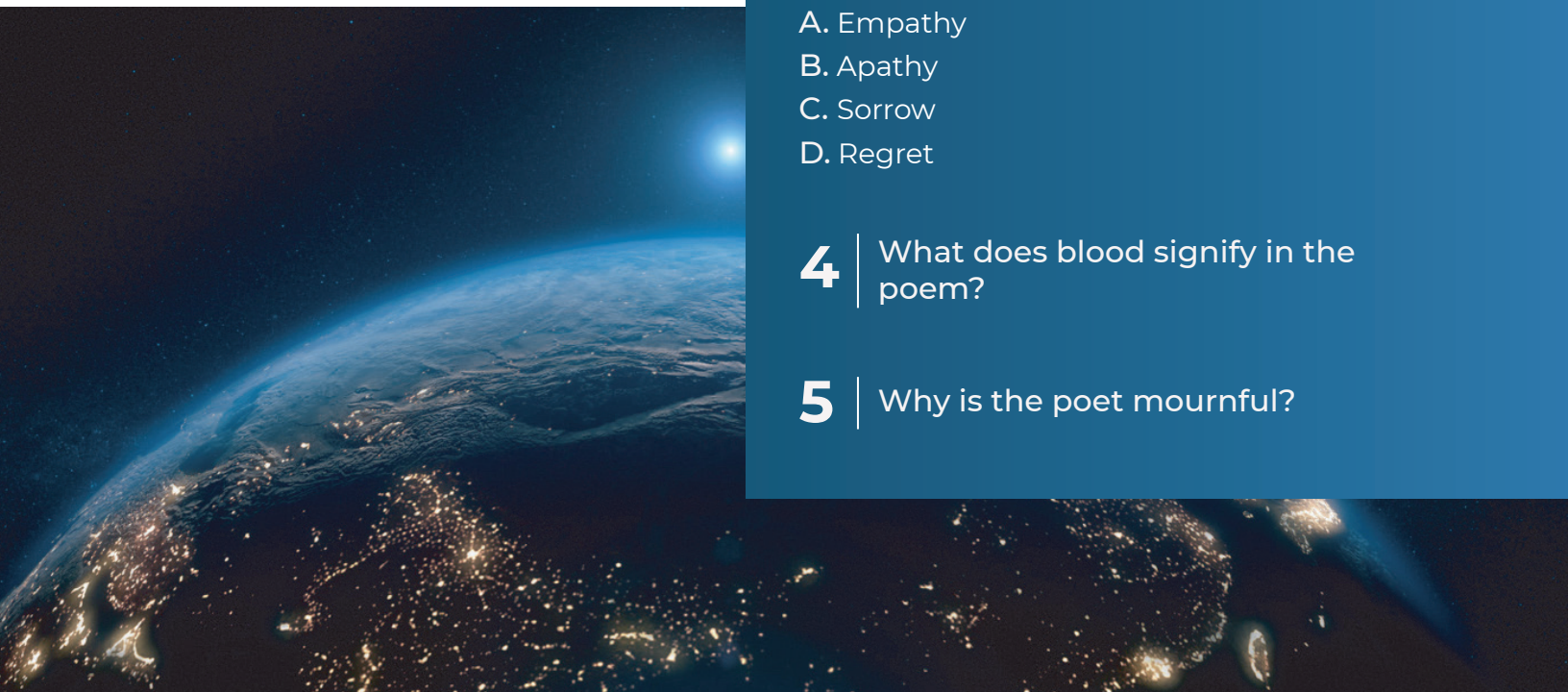
A. The temporality of humans
B. The quantity of humans
C. The impact of humans
D. The fragility of humans

3 What is the tone of this poem?

A. Empathy
B. Apathy
C. Sorrow
D. Regret

4 What does blood signify in the poem?

5 Why is the poet mournful?



Interview With Will Bauer

1. D
2. C
3. C
4. C
5. D
6. Many possible answers
7. Many possible answers

Watershed Conservation Champions

1. A
2. C
3. D
4. B
5. A
6. Human made infrastructures (typical-ly for water management)
7. Many Possible Answers

A Plea To The People Of New Brunswick

1. D
2. B
3. D
4. A
5. A
6. C
7. Many Possible Answers

ACID RAIN Then and now: how the 1991 acid rain agreement shows the effectiveness of taking a stand.

1. C
2. C
3. D
4. B
5. D
6. Domestic movement, international movement, 1991 agreement, and current movements.
7. Many Possible Answers

Resilience by nature, Hitting New Brunswick's land and water protection goals

1. D
2. B/D
3. D
4. C
5. A
6. Many Possible Answers
7. Many Possible Answers

The Demand for Clean Energy

1. D
2. A
3. C
4. C
5. A
6. Many Possible Answers
7. Many Possible Answers

Moncton Road Salt Management

1. B
2. D
3. A
4. D
5. A
6. To be professional, and the information is completely conveyed.
7. Many Possible Answers

Dead Zones: No Fish's Sea

1. C
2. B
3. A
4. B
5. C
6. Many Possible Answers
7. Many Possible Answers

Do You Have Nature Deficit Disorder? How One New Brunswick School Attempted to Solve the Problem

1. C
2. B
3. C
4. B
5. A/D
6. Many Possible Answers
7. Many Possible Answers

Ions, eons and a journey through time

1. C
2. C
3. B
4. A
5. B
6. Many Possible Answers
7. Many Possible Answers

Farther Down the Road

1. C
2. B
3. C
4. C
5. B
6. Many Possible Answers
7. Many Possible Answers

An accidental encounter that led me to the Serengeti

1. A
2. B
3. C
4. C
5. B
6. Gave her a new occupation.
7. Many Possible Answers.

Drowned Mouse In A Cup

1. A
2. A
3. B
4. C
5. C
6. Many Possible Answers
7. Many Possible Answers

Luna

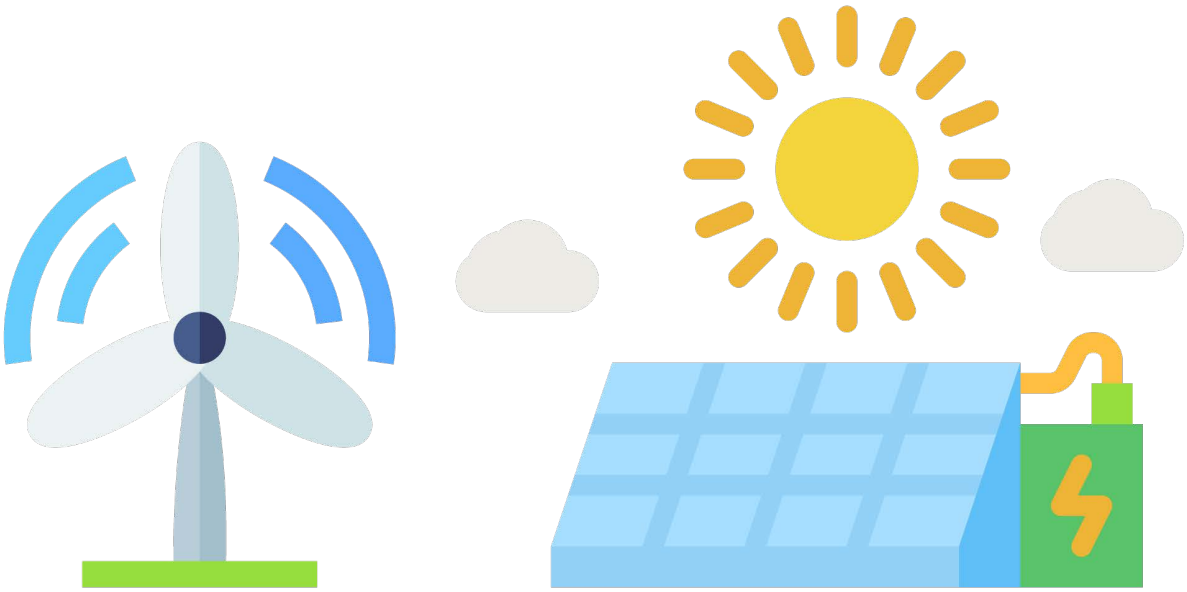
1. C
2. Many Possible Answers
3. B
4. A
5. A
6. Many Possible Answers
7. Many Possible Answers

Radio Weather

1. A
2. D
3. A
4. Many Possible Answers
5. Many Possible Answers

Patient is Earth

1. A
2. A
3. C
4. Many Possible Answers
5. Many Possible Answers



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