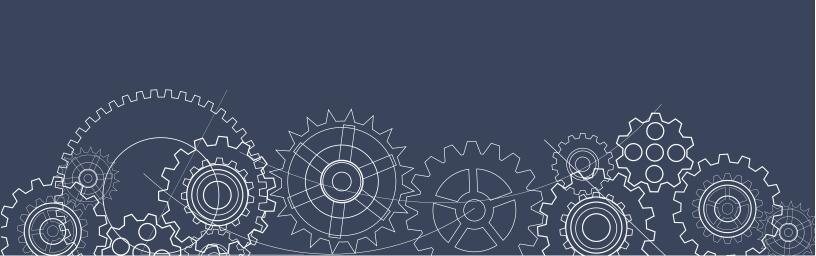
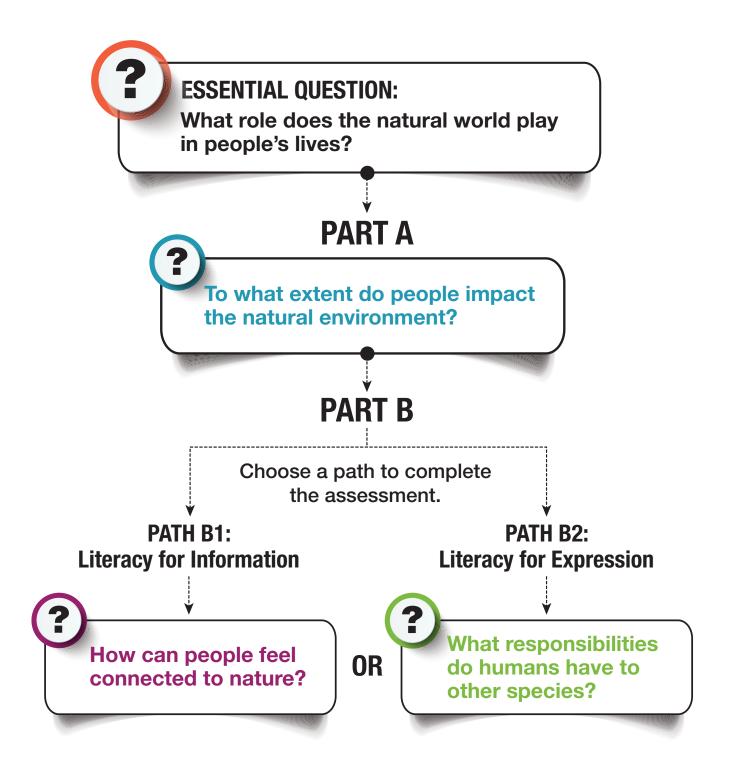


Grade 10 Graduation Literacy Assessment SAMPLE ASSESSMENT





These questions will help guide your thinking during the assessment.



PART A

Suggested Time: 65 minutes

?

ESSENTIAL QUESTION:

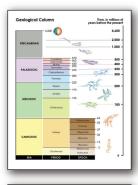
What role does the natural world play in people's lives?

?

To what extent do people impact the natural environment?

In this section you will

- analyze two graphics
- read a scientific article
- read an essay
- complete a chart
- complete a written response









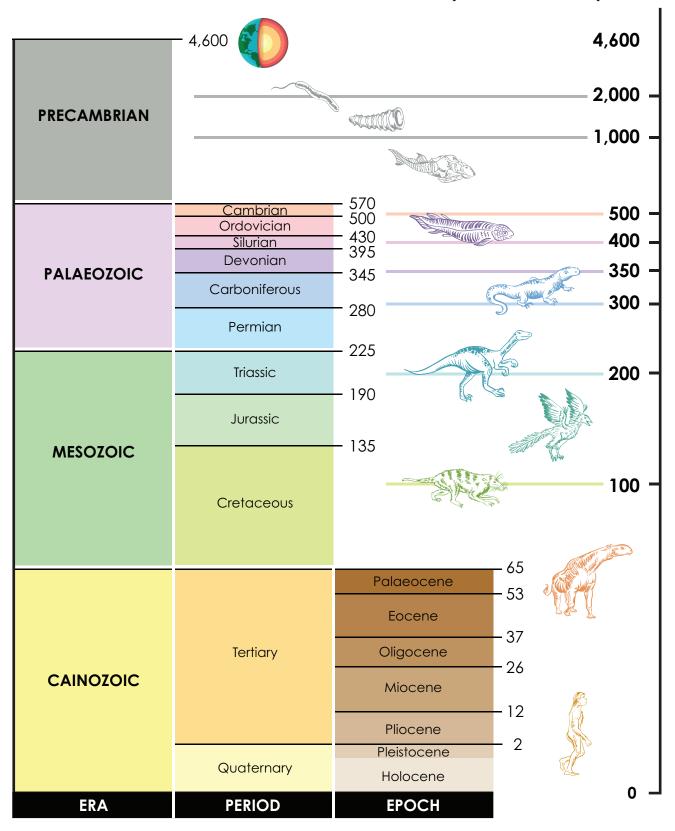


In the following texts:

Scientists are examining the human impact on Earth's geological periods.

Geological Column

Time, in millions of years before the present



Select the era, period, and epoch appropriate for the event described.

Event

Scientists discover a human jaw bone in Ethiopia dating back 2.8 million years.

Era	Period	Epoch
Precambrian	Cambrian	Palaeocene
Palaeozoic	Devonian	Oligocene
Mesozoic	Tertiary	Pliocene
Cainozoic	Quaternary	Pleistocene

Question A-2 (1 point)

Geological Column

Which skill is necessary to correctly understand this Geological Column?

- O interpreting the use of colour
- O analyzing the size of the illustrations
- O recognizing the compressed scale of the timeline

SMARTNEWS HISTORY SCIENCE INNOVATION ARTS & CULTURE TRAVEL AT THE SMITHSONIAN PHOTOS VIDEOS & PODCASTS GAMES SUBSCRIBE SHOP

AGE OF HUMANS HUMAN BEHAVIOR MIND & BODY OUR PLANET SPACE WILDLIFE LIFE IN THE COSMOS NEWSLETTER EARTH OPTIMISM SUMMIT

What Is the Anthropocene and Are We in It?

Efforts to label the human epoch have ignited a scientific debate between geologists and environmentalists



By Joseph Stromberg SMITHSONIAN MAGAZINE JANUARY 2013

Have human beings permanently changed the planet? That seemingly simple question has sparked a new battle between geologists and environmental advocates over what to call the time period we live in.

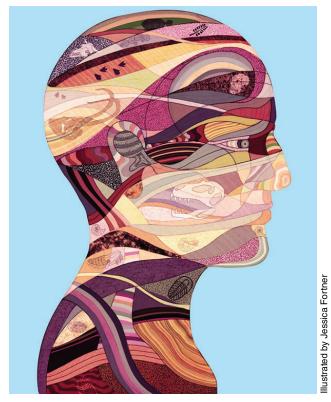
According to the International Union of Geological Sciences (IUGS), the professional organization in charge of defining Earth's time scale, we are officially in the Holocene ("entirely recent") epoch, which began 11,700 years ago after the last major ice age.

But that label is outdated, some experts say. They argue for "Anthropocene"—from *anthropo*, for "man," and *cene*, for "new"—because human-kind has caused mass extinctions of plant and animal species, polluted the oceans and altered the atmosphere, among other lasting impacts.

Anthropocene has become an environmental buzzword ever since the atmospheric chemist and Nobel laureate Paul Crutzen popularized it in 2000. This year, the word has picked up velocity in elite science circles: it appeared in nearly 200 peer-reviewed

articles, the publisher Elsevier has launched a new academic journal titled *Anthropocene*, and the IUGS convened a group of scholars to decide by 2016 whether to officially declare that the Holocene is over and the Anthropocene has begun.

Many stratigraphers (scientists who study rock layers) criticize the idea, saying clearcut evidence for a new epoch simply isn't there. "When you start naming geologictime terms, you need to define what exactly the boundary is, where it appears in the rock strata," says Whitney Autin, a stratigrapher at the SUNY College of Brockport, who suggests Anthropocene is more about pop culture than hard science. The crucial question, he says, is specifying exactly when human beings began to leave their mark on the planet: The atomic era, for instance, has left traces of radiation in soils around the globe, while deeper down in the rock strata, agriculture's signature in Europe can be detected as far back as A.D. 900. The Anthopocene, Autin says, "provides eyecatching jargon, but from the geologic side, I need the bare bones facts that fit the code."



Some Anthropocene **proponents** concede that difficulty. But don't get bogged down in the mud, they say, just **stipulate** a date and move on. Will Steffen, who heads Australia National University's Climate Change Institute and has written articles with Crutzen, recommends starting the epoch with the **advent** of the industrial revolution in the early 1800s or with the atomic age in the 1950s. Either way, he says, the new name sends a message: "[It] will be another strong reminder to the general public that we are now having undeniable impacts on the environment at the scale of the planet as a whole, so much so that a new geological epoch has begun."

To Andrew Revkin, a *New York Time*s reporter (now blogger) who suggested a similar term in 1992 that never quite caught on ("Anthrocene"), it's significant that the issue is being debated at all. "Two billion years ago, cyanobacteria oxygenated the atmosphere and powerfully disrupted life on Earth," he says. "But they didn't know it. We're the first species that's become a planet-scale influence and is aware of that reality. That's what distinguishes us."

Joseph Stromberg. "What Is the Anthropocene and Are We in It?" January 2013. https://www.smithsonianmag.com/science-nature/what-is-the-anthropocene-and-are-we-in-it-164801414/

Students completing the assessment electronically will be able to access the following glossary items with a mouseover

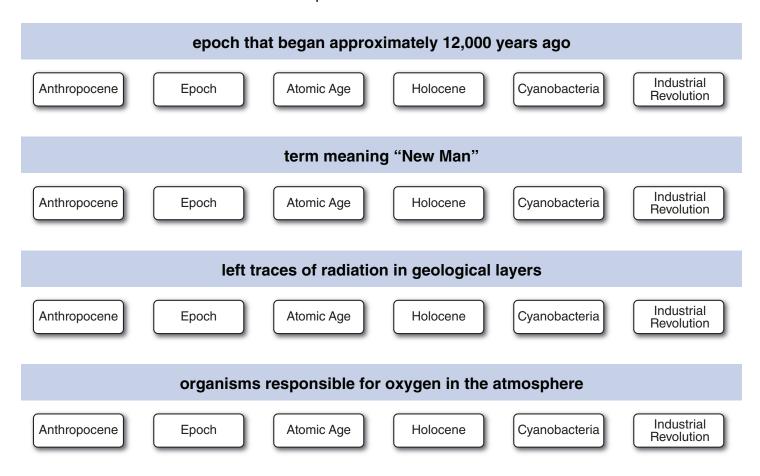
proponents: people who support an idea

stipulate: to state
advent: beginning of

Question A-3 (2 points)

What Is the Anthropocene and Are We in It?

Select the correct term for each description:



What key factors determine whether scientists will accept or reject the naming of a new "Anthropocene" epoch?

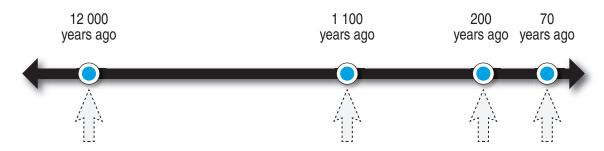
Select the two that apply.

	the scientists' particular areas of study
	the specific technologies that scientists use
	the type of scientific evidence that is available
\Box	the origin of the scientific name being considered

Question A-5 (1 point)

What Is the Anthropocene and Are We in It?

Select the point on the timeline to approximate when the impact of agriculture in Europe became noticeable in the geological record.



Question A-6 (1 point)

What Is the Anthropocene and Are We in It?

Why does Andrew Revkin agree that the name of the current epoch should be changed?

- The new name highlights the fragile nature of human life.
- The new name emphasizes the interdependence of humans and cyanobacteria.
- O The new name acknowledges that humans are conscious of the effect they have on their surroundings.



In the following text:

Members of the United Nations acknowledge that changes to the environment brought on by humans have become an important global issue.

The Losing World

At a UN convention, experts from 193 countries agreed that the planet is staring at an imminent crisis.

WE ARE IN 5,766 10,104 801 THE MIDST OF THE BIGGEST EXTINCTION **ENDANGERED VULNERABLE EXTINCT IN WIPED** CRISIS SINCE DINOSAURS THE WILD OUT **WERE WIPED OUT ENDANGERED** Total species: 63,837 **65 MILLION SPECIES YEARS AGO** 41% AMPHIBIANS **UNDER** 33% CORAL REEFS **THREAT** 25% MAMMALS 20% TREES 13% BIRDS Greater one-horned rhino is one of the most threatened species in the Himalayas. Others include Bengal tiger, Asian elephant, red panda THE 10 MOST VULNERABLE and snow leopard • Arctic foxes • Clownfish • Koalas • Emperor penguins • Leatherback turtles • Staghorn corals • Ringed 7.260 seals • Quiver trees • Salmon Beluga whales polar bears will be left by 2050, of the current population of 22,000 **25%** of marine fish species are 40% found at coral reefs, which OF THE GLACIERS cover less than 1% of the of the oceans have ARE RECEDING earth's surface been affected by human activities such as fishing and pollution 4.7 GtC 0.8% OF THE CORAL Amount of carbon REEFS ARE of the world's oceans

> Sources: International Union for Conservation of Nature, World Wide Fund for Nature, Ministry of Environment and Forests Businessworld. October 22, 2012

are protected, and

0.08% constitute

marine reserves

\$500 billion

is the contribution of

ocean-based businesses

of the world's population lives in the coastal zone

to the global economy. Half

POTENTIALLY

THREATENED

BY HUMAN

ACTIVITY

(gigatonnes) captured

by natural ecosystems

in a year

Why is it appropriate that humans have been placed at the centre of the infographic?

- O to illustrate the relationship between humans and other species
- O to show that humans are unaware of the dangers around them
- O to highlight that humans have little impact on other living things

Question A-8 (1 point)

The Losing World

What is the effect of choosing the image of a dinosaur to organize the graphic?

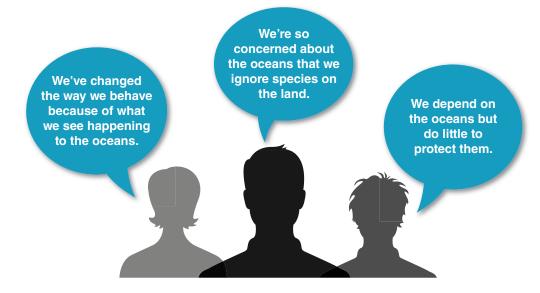
- It highlights a previous example of extinction.
- It illustrates all the species that have been lost.
- O It shows that land animals face the greatest danger.

Question A-9 (1 point)

The Losing World

Which opinion about oceans is supported by information found in the graphic?

Click on the speech bubble to indicate your response.





In the following text:

Traditional First Peoples knowledge provides a perspective on the connections between humans and the natural world.

Living with Bears

by Richard Wagamese



The old ones say that humility is the foundation of everything. Nothing can exist without it. Humility is the ability to see yourself as an essential part of something larger. It is the act of living without grandiosity. Humility, in the Ojibway world, means "like the earth." The planet is the **epitome** of a humble being, with everything allowed the same opportunity to grow, to become. Without the spirit of humility there can be no unity, only discord. Humility lets us work together to achieve equality. Humility teaches that there are no greater or lesser beings or things. There is only the whole. There is only the great, grand clamour of our voices, our spirits, raised together in song.

* * *

The bears start coming down from the high ground in late summer, when the mountain-ash berries, rosehips, saskatoon berries, blackberries and wild raspberries are ripe and fat. We see them on the roadside or lumbering along the hillocks, and as the days pass they become a fixture in our yard. We don't find it troubling. When you reside in bear country, you make a soul compact to coexist with them. You learn to be watchful on your morning walks and to make sure your property isn't bear-attractive. You learn bear time. After all, this is their land. They were here first. If anyone respects that statement, it's an **Indian**.

When you're out in the wild—or what's left of the wild in the Western world—there is a palpable sense of the unseen. You get the feeling you're being watched from the trees. That can be eerie at first, but once you're used to it, it's rather comforting. This is the original condition of things. Long before our world became the technologically driven, noisy, overpopulated place it is now, many beings found respite in wild places, and people felt a natural connection to the land.

We can opt for the convenience of machinery today, using quads and ATVs and dirt bikes to get us deep into the back country, but nothing connects you to the land as

easily as walking. Hiking in the acute silence up here in the mountains, you always sense the possibility of bears. For me, that's magical. Walking on the land also keeps you alert to things you would ordinarily miss. You hear things you are usually too busy to register, experience yourself as a true part of nature. Alone in the wild, you become keenly aware of who and what you are.

5 So I'm not troubled by the presence of bears. What does trouble me, though, is news of bears losing their lives after run-ins with those who occupy their territory. Some people think of bears as garbage-raiding pests or as vile predators intent on snatching the cat, the dog or the children. I'm not afraid of bears, but I am respectful of them. At our place, we keep our garbage out of harm's way until it's dump day and we can dispose of it. We're careful with our barbecue. Bears are prowlers and foragers, and we need to understand that.

My people say that the bears are protectors. In our Ojibway clan system, the Bear Clan is responsible for security and law. As totems, bears symbolize strength, fortitude, justice and wisdom. When my people see a bear in the bush, they always stop and look at it before moving away. In the Ojibway world, a bear is a spirit being, a special teacher. I've learned over the years to hold them in the same regard.

This morning as I wrote, Molly the dog growled. I looked out to the end of our driveway and saw a juvenile male bear reared up on his hind legs chewing on leaves and berries. He was a marvellous specimen. His coat was thick and unmatted, and he had the beginnings of the rounded shape that comes from good feeding in preparation for the long hibernation to come. We watched him until he finally trotted through the yard, across the gravel road and off into the trees. He was one bear in a country of them. I knew he would find a place to hunker down as the morning traffic increased and the high August heat built up. In the cool of evening, he'd emerge again to forage in the berry bushes that surround us. That's just how it is.

Every day now, the oceans are becoming more acidic. Polar ice is melting. Droughts, floods, earthquakes and wildfires are increasingly commonplace. Bees are disappearing, and there are fewer salmon in the spawning grounds. These are only some of the rapid changes happening all around us. Just as our human lives are affected by these changes, so are the lives of the animals that share our planet.

Bears are a grounding tool for me. Whenever I see one, I am reminded that the old wisdom has something significant to impart about how I negotiate my way in the world. I belong to a web of life that needs all its parts to sustain itself. The ancient teachings are not a romantic throwback to a vanished lifestyle but a resonant reminder of our contemporary responsibilities.

10 Bears are protectors, my people say, and this presence reminds us that the natural world urgently needs our protection. That is the bear's particular gift to each of us.

"Living with Bears" by Richard Wagamese from *One Story, One Song.* 2015, Douglas & McIntyre. Reprinted with permission from the publisher.

Students completing the assessment electronically will be able to access the following glossary items with a mouseover

epitome: a perfect example

Indian: First Peoples; "Indian" is not the preferred term

Question A-10 (1 point)

Living with Bears

The word



best expresses the meaning of "humility" in "Living with Bears."

According to the author, what is the "gift" that bears provide to humans?

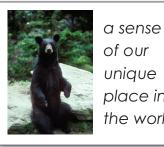
Click on the box to indicate your response.



a glimpse of our origins in simpler times



a reminder of our obligations to other species



of our unique place in the world

Question A-12 (1 point)

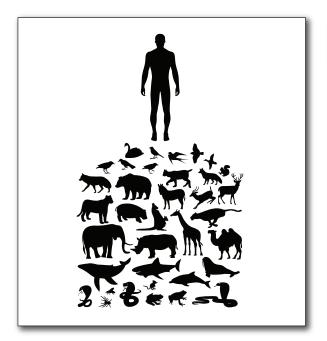
Living with Bears

Which observation about modern life is expressed throughout "Living with Bears"?

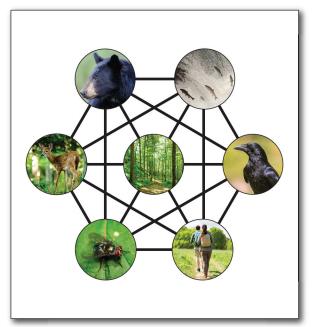
- People find happiness through material possessions.
- Life was more fulfilling in the past than it is in the present.
- Today's conveniences disconnect us from the natural world.

Which graphic best symbolizes Wagamese's view of the world?

Click on the graphic to indicate your response.









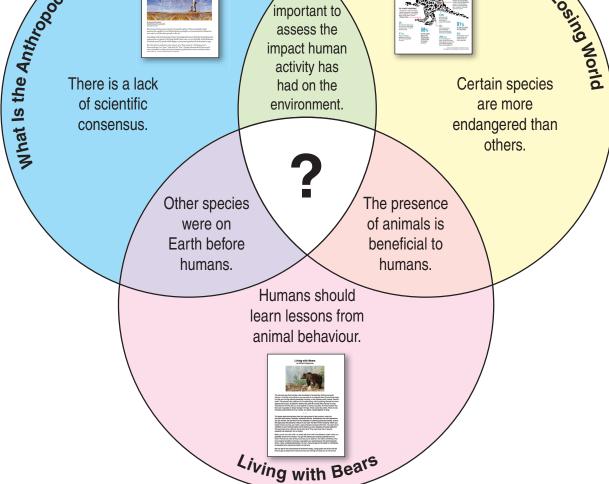
Which statement should be in the centre of this Venn Diagram?

0	Humans may deny that environmental change is inevitable.
0	Humans often have a desire to categorize the world around them.
0	Humans can exercise their dominance over nature in positive ways.

O Humans should take responsibility for their relationship with the environment.

HUMANS AND NATURE

There is of str. It is important to assess the impact human activity has had on the Certain species environment. are more endangered than others.



Suggested time: 10 minutes

Based on these texts, write a statement that summarizes the relationship between humans and the natural world.

Identify a key idea from each of the texts listed below and briefly explain how it supports your statement about the relationship between humans and the natural world.

What Is the Anthropocene and Are We in It? Key idea and brief explanation:



The Losing World

Key idea and brief explanation:



Living with Bears

Key idea and brief explanation:



Write a statement explaining how deeper understanding of this relationship might affect people's future behaviour.



To what extent do humans have control over the natural world?

- Respond critically to this question in a well developed multi-paragraph composition.
- · Communicate a convincing argument.
- Show your understanding of the information you have read in this section of the assessment by making reference to one or more of the texts.

Suggested time: 25 minutes

PART B

Suggested Time: 55 minutes

Choose a path to complete the assessment.

PATH B1: Literacy for Information

How can people feel connected to nature?

If you choose this path you will read and analyze

- two infographics
- two articles

You will also express yourself in writing.



PATH B2: Literacy for Expression

What responsibilities do humans have to other species?

If you choose this path you will read and analyze

- · one article
- one story

You will also express yourself in writing.





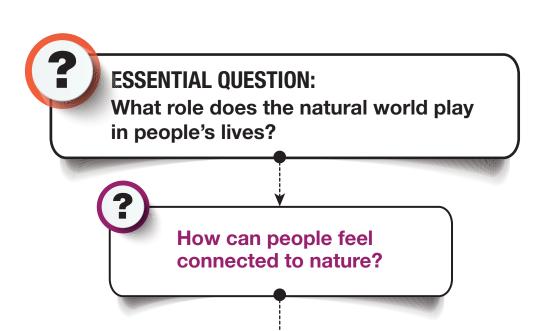
SELECT

You have chosen:



PATH B1: Literacy for Information





In this path you will read and analyze

- two infographics
- two articles

You will also express yourself in writing.





In the following texts:

There are many benefits to having a connection with nature.





The Benefits of Nature

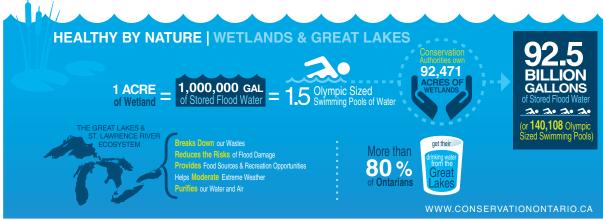
Ontario's Conservation Areas Contribute to Healthy People











&

Select the suggested strategy for coping with the challenges listed in the left column below.

Challenge	Strategy		
	plant more trees		
ADHD (Attention Deficit	restore damaged wetlands		
(Attention Deficit Hyperactivity Disorder)	encourage walking in nature		
	create green spaces in every residential area		
	plant more trees		
	restore damaged wetlands		
asthma	encourage walking in nature		
	create green spaces in every residential area		

Question B-2 (1 point)

The Benefits of Nature

How might the source of the information in this infographic limit its usefulness to western Canadians?

a specific region of the country.

The information is focused on

a global health challenge.
a need for water conservation.

Connecting with Nature Boosts Creativity and Health

Richard Louv explains how society can overcome naturedeficit disorder.

By Brian Clark Howard, National Geographic PUBLISHED JUNE 30, 2013



A young girl gazes at the desert landscape. Photograph by John Burchman, National Geographic

"I've been arguing for a while that connection to nature should be thought of as a human right," Richard Louv told the crowd assembled in the courtyard of National Geographic headquarters in Washington, D.C., on Wednesday. Louv was there to inspire the staff about the benefits of spending time outdoors.

Louv, the author of the bestsellers *Last Child in the Woods* (2005) and *The Nature Principle* (2011), coined the term "nature-deficit disorder" to describe the loss of connection children increasingly feel with the natural world. Nature-deficit disorder is not a clinically recognized condition, he explains, but rather a term to evoke a loss of communion with other living things. Nevertheless, he argues, nature-deficit

disorder affects "health, spiritual well-being, and many other areas, including [people's] ability to feel ultimately alive."

The causes of the disorder include loss of open space, increasingly busy schedules, an emphasis on team sports over individualized play and exploration, competition from electronic media, and what Louv and others call a "culture of fear," in which people are afraid to visit natural areas or even go outside due to heavy media coverage of violent events.

To dive deeper into Louv's ideas, National Geographic sat down with him for a few questions.

Can you share some specific examples of how a connection to nature improved someone's life?

[National Geographic Emerging Explorer] Juan Martinez is one example. He grew up in South Central Los Angeles, where he was headed for gangs and trouble. A principal told him he'd have to go to detention or join the eco club. He thought the club sounded like a bunch of nerds, but he joined. He resented it at first, but then had an assignment to grow something.

He had seen his mother break up concrete behind their house to grow chilis to eat. So he grew a jalapeño chili plant and took it home to show her that he could nurture life too. That plant, and later an eco club trip to the Grand Tetons, changed his life. He is now an environmentalist and head of the Natural Leaders Network, which is part of the Children & Nature Network. He is also a National Geographic explorer and has spoken at the White House twice.

It doesn't seem to matter what someone's politics or religion is, they want to tell me about the treehouse they had as a kid, if they are old enough—for the younger people that is less likely to be true. This is the only issue I've seen that brings people together, because nobody wants to be in the last generation where it's considered normal for kids to go outdoors.



So nature can transform your life. He found not only nature, he found people through nature. He reconnected to South Central in a new way.

How can city dwellers connect with nature?

As of 2008 more people lived in cities than the countryside. That marked a huge moment in human history, and it means one of two things: Either the human connection to nature will continue to fade, or it means the beginning of a new kind of city.

One way is through "biophilic design" [nature-inspired design], which is the incorporation of nature where we live, work, learn, and play, not only as something we drive an hour to visit. Not only parks, but also in the way we design our neighborhoods, our backyards, and our buildings.

10 I believe cities can become engines of biodiversity. It starts with planting a lot of native plants, which revive the food chain and bring back butterfly and bird migration routes.

The word "sustainability" is problematic, because to most people it means **stasis**, survival, and energy efficiency. We have to do those things, but that only goes so far in igniting the imagination. Increasingly, I talk about a "nature-rich society," a different way to look at the future that is not just about survival, but about something much better.

You have written about the impacts of "nature time" on problems like anxiety, depression, ADD, and obesity. How important is that?

If you look at a new body of research on depression, ADD, physical health, child obesity, and the epidemic of inactivity, nature is a good antidote to all of that. I didn't coin it, but I like the phrase "sitting is the new smoking," because new evidence shows that sitting long hours every day can have serious health risks similar to those caused by smoking.

Researchers at the University of Illinois are investigating whether time in the woods could be used to supplement treatment of ADD. A study at the University of Kansas found that young people who backpacked for three days showed higher creativity and cognitive abilities. People in hospitals who can see a natural landscape have been shown to get better faster.

As an antidote, we need to figure out ways to increase nature time even as technology increases. It has to be a conscious decision.

Speaking of technology, how much are "screens" like TV, the Internet, video games, and smartphones to blame for keeping kids indoors?

I always resist demonizing technology and video games, specifically, partly because when people write about this issue they go immediately to that. But then they ignore these other things, like "stranger danger" [Louv has argued that sensationalist media has made parents fearful of letting children go outside] and bad urban design, the fact that our education system needs a lot of work, the fact that we are canceling recess and field trips—there are a lot of other reasons out there.

Having said that, there's no doubt that electronics have something to do with this. The Kaiser Foundation found that kids spend 53 hours a week plugged in to some kind of electronic medium, and I imagine that's true of adults too. I have an iPhone and iPad, I spend a lot of time with screens, but I think the more high-tech our lives become, the more nature we need as a balancing agent.

This interview has been edited and condensed.

Brian Clark Howard. "Connecting with Nature Boosts Creativity and Health." *National Geographic*. 30 June 2013.

Students completing the assessment electronically will be able to access the following glossary item with a mouseover

stasis: state of inactivity

Question B-3 (2 points)

Connecting with Nature Boosts Creativity and Health

Label the ideas presented in each quotation from the article as either a problem or a solution.

...nature-deficit disorder affects "health, spiritual well-being, and many other areas, including [people's] ability to feel ultimately alive." (paragraph 2)

Problem

Solution

...loss of open space, increasingly busy schedules, an emphasis on team sports over individualized play and exploration, competition from electronic media, and what Louv and others call a "culture of fear"... (paragraph 3)

Problem

Solution

It starts with planting a lot of native plants, which revive the food chain and bring back butterfly and bird migration routes. (paragraph 10)

Problem

Solution

The Kaiser Foundation found that kids spend 53 hours a week plugged in to some kind of electronic medium, and I imagine that's true of adults too. (paragraph 16)

Problem

Solution

What advice does Richard Louv give for combatting "nature-deficit disorder"?			
Select the two that apply.			
Create nature-based education programs.			
Design cities that incorporate elements of nature.			
Promote organized sporting activities to prevent disease.			
Develop applications that integrate technology with nature.			