



Episode 4: Coming Home

GRADE 10 TEACHER'S GUIDE



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The Sacred Balance



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INTRODUCTION

The Sacred Balance is a four-part video series in which David Suzuki explores our place in nature. In the fourth video of the series entitled Coming Home, David Suzuki explores the spiritual connection, which is necessary for human long-term health and happiness. The video consists of five sub-themes, each of which contains resources on the Sacred Balance website www.sacredbalance.com that complement the video. This guide provides teachers with suggestions on how to use the video and website resources in the science classroom.

Themes	Sacred Balance Website Resources		
	Bio	Articles	Games/Animations
Respecting the Prey: An Inuit Hunter's View		An Inuit Hunter's View The Living Cell as a Group Effort	
Exploring Love as a Key Factor in Child Development	Lucy Le Mare	Love and Human Development How Maria Is Doing	
Nature and the Human Spirit: A Conversation on Biophilia		Care to Visit Walden Pond? E. O. Wilson on Nature and the Human Spirit	
Ecopsychology: Therapy for People and the Planet		Therapy for People ... and the Planet	Create a Soul Tracking Guide
Ethnosphere: Web of Cultural Life	Wade Davis	The Biosphere and the "Ethnosphere" The Wonder of Nature from a Biblical Perspective	

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Correlation to Pan-Canadian Science Protocol

LEVEL	SUBJECT	TOPIC
Junior Science	Grade 10	Sustainability Of Ecosystems Weather Dynamics

P R E C I S

Meeting basic physical needs is just a beginning for human well-being. Beyond these, we have yet another -- one that is just as vital to our long-term health and happiness. It is a need that encompasses all the rest, an aspect of human life that is so mysterious it is often disregarded or denied. Though we sometimes call it love, it is in fact more than that. Like air and water, fire and earth, we need spiritual connection; we need to understand where we belong.

David Suzuki begins his search for answers in the high Arctic, along the northern tip of Baffin Island, 11 hours by snowmobile from the tiny community of Pond Inlet. Here, travelling on their annual spring hunt, the Inuit community must band together to survive. These people are intuitively connected to their surroundings, sharing knowledge, food and love.

We need love -- it s a physical fact. Without love, children wither, even die. David discovers the legacy of Romanian dictator Nicolae Ceausescu, who forced families to have more children than they were able to support. Tens of thousands of these children grew up with no loving attention in overcrowded orphanages. They became severely affected physically, mentally and emotionally. This tragedy inadvertently became a terrible experiment allowing researchers to study the role of attachment and love in a child s development. David meets a Canadian couple who have adopted Maria, a Romanian orphan. Can the love of Maria s new parents repair the damage the lack of love caused?

The power of love holds families together, and it also ties friends and communities together and connects us to a much wider world that includes nature. It s essential for our happiness. Renowned Harvard biologist E. O. Wilson takes David to Thoreau s famous Walden Pond where Dr. Wilson explains the deep human need to have a relationship with the natural world. Wilson calls this need biophilia -- the innate, hereditary need of human beings to affiliate with nature.

Living in our cities of steel and concrete, it s too easy to forget that we are biological beings, dependent on the Earth for our survival. David goes to Boston to meet Harvard psychologist Sarah Conn. From her, he learns first-hand how the new techniques of ecopsychology are helping people reconnect with nature.

Since human beings first appeared on Earth, they have lived in a sacred relationship with the place they inhabit, the land they depend on. High in the Andes, David travels with his friend ethnobotanist Wade Davis to the village of Chinchero. Here, people still believe that the Earth is alive, that they live among the gods. This understanding informs their day-to-day actions.

As David has discovered throughout the series, we are not alone. Nothing can exist alone. We all know where home is -- it s with our family, with memory and hope, but our family is far larger than we realize. We re at home in the human community and in the biosphere, close relatives of every living thing. We re all creatures of the living Earth.

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TEACHER PREPARATION

- ◆ Preview the five-minute highlight video on the Sacred Balance website to familiarize yourself with the content of the video. Alternatively, read the script found at the end of this guide
- ◆ Explore The Sacred Balance resources on the website.
- ◆ Select appropriate biographies, webcasts, articles or games for students to explore before watching the video or to extend their knowledge after watching the video.
- ◆ Select appropriate before, during and after viewing exercises from this guide or adapt and design your own based on the resources here.
- ◆ Provide students with the opportunity to learn vocabulary from the enclosed glossary for sections of the video you would like them to see. The glossary consists of two parts: defined words to support the learning of science vocabulary and undefined general words that ESL/ELD students may not be familiar with.
- ◆ Photocopy critical sections of the enclosed script for students to read prior to watching the video. Alternatively, provide the sections to students after previewing the video, to free students from the need to take notes during the video.

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BEFORE VIEWING

Do You Know Your Home?

1.

a) In this video, there are many compound words made up of two roots. For example, photosynthesis is a compound word derived from photo -- meaning light -- and synthesis, -- meaning to make.

Use your dictionary to look up the following prefixes.

Word	Meaning
hydro	
strato	
tropo	
geo	
bio	
ethno	

Answer:

Word	Meaning
hydro	water
strato	spread out
tropo	turning, change
geo	earth
bio	life
ethno	people

b) Our home is a sphere. This sphere is made from many parts. Do you know the parts of your home? Take this quiz and find out. Use the meaning of the prefixes above to help you choose the best answer for the following multiple-choice questions.

(1) Hydrosphere

- ***** (a) makes up 70% of the Earth s surface
- ***** (b) the UV-protecting ozone is found in this layer
- ***** (c) sum of all human cultural contributions since the dawn of consciousness
- ***** (d) where most of our weather happens

(2) Troposphere

- ***** (a) sum of all human cultural contributions since the dawn of consciousness
- ***** (b) where most of our weather happens
- ***** (c) life is found and supported in this sphere
- ***** (d) air and moisture surrounding the Earth

(3) Atmosphere

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- °°°°°(a) sum of all human cultural contributions since the dawn of consciousness
- °°°°°(b) where most of our weather happens
- °°°°°(c) where most of the UV-protecting ozone is
- °°°°°(d) air and moisture surrounding the Earth

(4) Ethnosphere

- (a) most of our weather happens here
- °°°°°(b) where life can be found and supported
- °°°°°(c) the UV-protecting ozone is found in this layer
- °°°°°(d) sum of all human cultural contributions since the dawn of consciousness

(5) Biosphere

- °°°°°(a) air and moisture surrounding the Earth
- °°°°°(b) sum of all human cultural contributions since the dawn of consciousness
- °°°°°(c) makes up 70% of the Earth s surface
- °°°°°(d) where life can be found and supported

(6) Stratosphere

- °°°°°(a) where most of our weather happens
- °°°°°(b) where most of the UV-protecting ozone is
- °°°°°(c) where life can be found and supported
- °°°°°(d) air and moisture surrounding the Earth

(7) Geosphere

- °°°°°(a) solid part of the Earth
- °°°°°(b) air and moisture surrounding the Earth
- °°°°°(c) where most of our weather happens
- °°°°°(d) sum of all human cultural contributions since the dawn of consciousness

Answer Key:

- (1) Hydro means water, hence the answer is °c) makes up 70% of the Earth s surface.
- (2) Tropo means change. The changing conditions temperature and pressure causes our weather so the answer is c).
- (3) Atmo means vapour, hence °c) air and moisture surrounding the Earth.
- (4) Ethno means people, hence the answer is °b) sum of all human cultural contributions since the dawn of consciousness.
- (5) Bio means life, hence the answer is °c) where life can be found and supported.
- (6) Strato means spreading out, hence the answer is b) where most of the UV protecting ozone is.
- (7) Geo means earth, hence the answer is °b) solid part of the Earth.

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2. A theme of The Sacred Balance is that natural processes involve co-operation. The living cell works as a group effort. Brainstorm ways in which the living cell is similar to an ecosystem.

Answer: Student responses will vary. The cell mirrors the larger system, which it is contained in. For example, students may see that the living cell, like an ecosystem, needs a protective barrier. The goal is for students to realize that the Earth is composed of systems within systems.

3. One way to experience a love for the natural world is by spending time in it. Visit the Sacred Balance website at www.sacredbalance.com. Use links within Episode 4 to locate the Soul Tracking Guide. Create your own customized soul tracking guide using the online "Wizard."

Based on the reflective questions found at the end of your custom-made guide, write about your experiences in a journal. You may choose to draw images as well. Share these with a partner.

Answer: Student responses will vary. This activity can be done as a whole class activity or assigned for individual completion outside of class time.

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DURING VIEWING

In the video Coming Home, some of the people that David Suzuki interviews are a psychologist named Lucy Le Mare, a biologist named E. O. Wilson, an ecopsychologist named Sara Conn, and an ethnobotanist named Wade Davis.

Read the quotations, and highlight two to three key words or phrases that will help you remember the quote as you watch the video. Jot down some notes to help you remember the scene for classroom discussion after the video.

Quotes from Coming Home:	Participants	What is happening during this scene?	Comments
<i>The goal of the study was really to take advantage of a very tragic situation that allowed us to take a look at the impact of early deprivation on children s development. In their early lives, they never had that face-to-face interaction with a supportive caregiver.</i>	Lucy Le Mare		
<i>It s part of what I call biophilia, a word that has begun to get some currency: the love of life -- not just the love of life -- but the innate, hereditary tendency to affiliate with life, to be attracted to it, to like its variety, to enjoy and prefer certain qualities of it.</i>	E. O. Wilson		
<i>We re here today to invite you to go into a meditative state, an opening sensory state; see what calls to you. It s called soul tracking, and it s really following a fascination or something that draws you.</i>	Sarah Conn		

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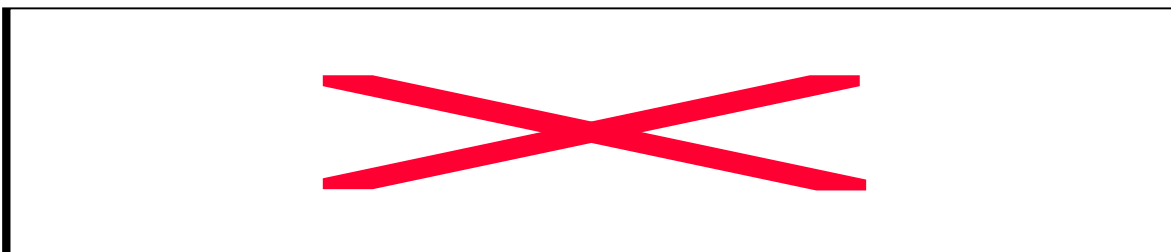
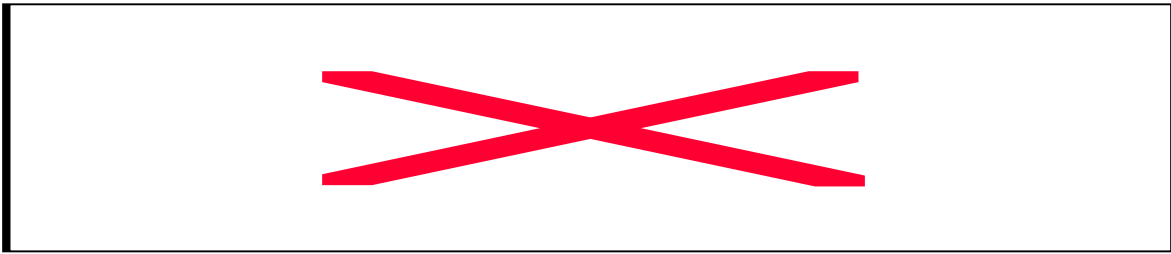
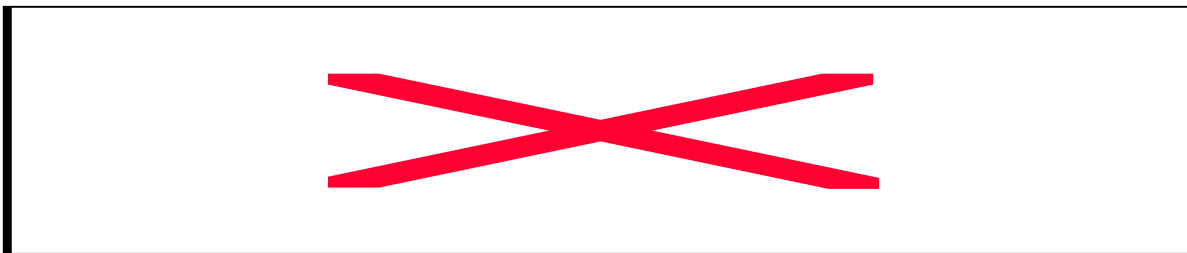


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AFTER VIEWING

1. Arctic Food Web

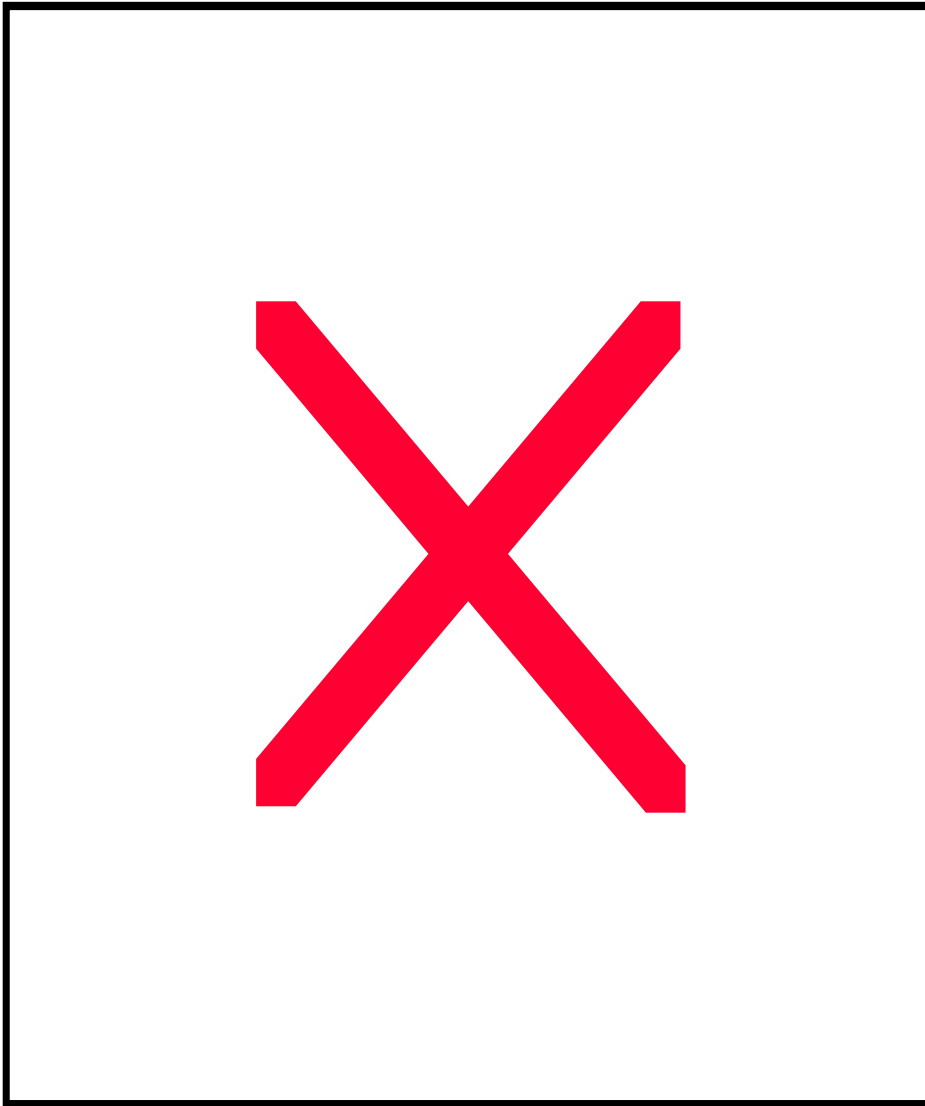
Study closely the artic food web below. Below the food web are three scenarios that can affect the food web. For each scenario, use the food web to map out as many of the consequences as you can. Add branches to the cause-and-effect diagrams below if needed.



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Answer: Student responses will vary in the mapping of consequences.

Sample Response: If there is a sudden decline in the fish population, then the bear, the seal, and the walrus populations will decline. Also due to the decline in the fish population, pelagic invertebrates have more carnivorous zooplankton and carnivorous benthic invertebrates to consume. Thus, their population will increase.

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2.
a) Can you figure out the meaning of these words from the Coming Home video? Start by breaking each word into the root words it is made from. Use a dictionary to check whether the meaning you made is the actual meaning.

Word	Meaning
biophysicist	
ethnobotanist	
ethnosphere	
biophilia	
Arimozoic	
ecopsychology	
biodiversity	

Word	Meaning
biophysicist	A biophysicist is a person who applies physics to understand biological processes.
ethnobotanist	An Ethnobotanist is a person who studies the plant lore and agricultural customs of a people.
ethnosphere	Ethnosphere is the web of cultural life.
biophilia	Biophilia is an appreciation of life and the living world.
Arimozoic	Arimozoic means the age of loneliness.
ecopsychology	Ecopsychology is the discipline that combines psychology with ecology.
biodiversity	Biodiversity is the quantity and variety of species within an ecosystem.

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b) Why do you think scientists create new words?

Student responses will vary. This is a reflective question. Students need to be given opportunities to see the interplay between language and science.

3. Why did David Suzuki feel uncomfortable during his guided meditation in a natural area with Sarah Conn, the ecopsychologist? How does this compare to your experience with soul tracking?

David says: I m one of those Mr. Rationalities, so letting my hair down is not easy. Opening himself up to nature is at first difficult. This may happen when experiencing something new. This quote can be used as a catalyst for discussion of students experiences with soul tracking.

4. Henry David Thoreau, a great American naturalist, wrote what is in the following two quotes.

Quote 1: "I came to the woods because I wished to live deliberately, and see if I could learn what it had to teach.... and not, when I came to die, discover that I had not lived."

Quote 2: "A lake is Earth's eye; looking into it, the beholder measures the depth of his own nature."

Pick one of these quotes. What do you think Thoreau meant? Write down your thoughts.

Student responses will vary.

5. The Earth needs nurturing just as much as we need nurturing. What five acts can you commit to today that would nurture the Earth?

Student responses will vary. At the end of this video, you may choose to introduce an action project with your students.

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GLOSSARY

agriculture	Agriculture is the science, art, and business of cultivating soil, producing crops, and raising livestock: farming.
amphibians	Amphibians are cold-blooded, smooth-skinned vertebrates, such as frogs or salamanders, capable of living both on land and in water.
anthropology	Anthropology is the scientific study of the origin; the behaviour; and the physical, social, and cultural development of humans.
behaviour	Behaviour is the action or reaction of an organism in any situation.
biologist	A biologist is a person who studies the science of life and of living organisms, including their structure, function, growth, origin, evolution, and distribution.
biophilia	Biophilia is an appreciation of life and the living world.
biosphere	Biosphere is the part of the Earth that supports life and where living organisms can be found.
community	Community is a group of plants and animals living and interacting with one another in a specific region under relatively similar environmental conditions.
ecopsychology	Ecopsychology is the discipline that combines psychology with ecology
ethnobotanist	An ethnobotanist is a person who studies the plant lore and agricultural customs of a people.
ethnosphere	Ethnosphere is the web of cultural life
genes	Genes are hereditary units made from a sequence of DNA found on chromosomes that determine particular characteristic in an organism.
genetic	Genetic means relating to genes.
indigenous	Indigenous means originating and living or occurring naturally in an area or environment.

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innate	Innate is a characteristic possessed from birth.
migration	Migration is the act of moving from one region to another periodically.
mammals	Mammals are warm-blooded vertebrate animals, including humans, characterized by a covering of hair on the skin and, in the female, milk-producing mammary glands for nourishing the young.
naturalist	A naturalist is a person who is knowledgeable in natural history, especially in zoology or botany.
population	Population is all the organisms that constitute a specific group or occur in a specified habitat.
psychologist	A psychologist is a person trained and educated to perform psychological research, testing, and therapy.
reptiles	Reptiles are cold-blooded, usually egg-laying vertebrates, such as a snakes, lizards, crocodiles, turtles, or dinosaurs, having an external covering of scales or horny plates and breathing by means of lungs.
sensory	Sensory relates to the senses where impulses are transmitted from sense organs to nerve centres

The following non-science words may be new for students. Provide time for students to study and learn these words prior to watching this episode.

absolute	deprivation	institution	reaffirmation
absolution	dictator	isolation	reciprocal
accoutrements	discipline	meditation	reciprocate
affiliate	distaste	metaphorical	resilience
circumference	essential	myriad	revelation
colleague	exiled	mystique	reverence
consciousness	expedition	pathological	spiritual
convergence	exquisite	prescribe	therapy
currency	fragile	rational	
deficit	individualism		

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EPISODE 4 SCRIPT

David V/O: It s not always easy to survive on Earth. And yet we humans live in every part of the planet. How do we do it? How do we play our part in the sacred balance of life? I began my search for answers in the Arctic and discovered one thing right away. We can t do it alone. It s early June -- spring in the high Arctic. The ice is starting to break up. We re travelling to the northern tip of Baffin Island, 11 hours by sled from the remote community of Pond Inlet. It s a place where people have to band together to survive.

Right now it s time for the spring migration when the Inuit travel onto the ice to camp and hunt. I ve been invited to join a family expedition. While I was with them, I saw how close they are to one another and this place. The camp at the fishing lake was already set up when I arrived. Simon Merkosak made the introductions.

Subtitle: This is David, We re glad to have him with us [introductions].

David V/O: I met the elders and the whole extended family.

Subtitle: I set the nets last night there should be more than enough.

David V/O: Wherever we stopped, the first priority was a cup of hot tea. The next was shelter and food.

David: Oh, here comes one, woool! Hey nice one!

David V/O: Dinner was waiting for us -- a magnificent Arctic char.

David: Thank you; you eat the skin too, eh?

David V/O: The people I spoke to told me they ve always lived here, sharing knowledge, food, and love.

Subtitles: My little one, my little one, child of my child, my lovely child .

David V/O: At midnight, the hunters decided to move on. We set out for the edge of ice and drove for hours.

Subtitles: Let s go. There ll probably be narwhal, maybe even walrus.

David V/O: Elijah Panipakoocho told me he has been hunting here for decades. This year, he s brought two younger hunters with him -- Julita Koonark and David Suqslak.

Subtitles: They ll be coming from over there, from the south. We d better get the guns ready.

David V/O: Marine mammals are also moving northward to their summer grazing in the rich waters of the Arctic Ocean. They re part of a great convergence of life. We spent two days waiting -- the hunters

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listening and looking out across the water. A lot depends on their skill -- much of their family's food comes from the spring hunt.

David: *Ooouu, very good!*

David V/O: I was amazed at the sharpness of their senses, their intuitive connection with the world around them. Long minutes before I heard anything, David Suqslak sensed the coming pulse of life. He knew the narwhal were on their way -- the animal these hunters value most. They told me, you have to shoot just when it's taking a breath, or it will sink out of reach forever. Every narwhal is precious -- not one must be wasted. Every hunter within earshot came to help and to share the muktuk. That's the skin and the fat beneath. Raw muktuk keeps them strong, the hunters told me. It's their favourite food.

David Suqslak shot the narwhal, but he didn't seem to own it. He took the first taste, and then the rest was shared. Over thousands of years, they've learned how to find the food they need. And they've also learned a deep respect for their prey. According to the old stories, a disrespectful hunter and his family with go hungry. The truth of all life is starkly clear in the Arctic. We can't survive alone. We're born to be connected. And science is beginning to tell us how and why.

As a baby is born, she's not separated from her mother. She's tied to her by sight and sound and touch, caught in a web of chemical connections, a beam of attention. Her parents are caught in the same web. There's a force that shapes us into humans, binds us together all life long. We call it love. But it's more than a feeling; it's a physical fact. Without love, children wither, even die.

Maria: Where do zebra live?

Martha: Where does a zebra live, dad?

Al: A zebra lives in Africa

Martha: Where does Maria live? Maria lives in Canada -- Victoria .

David V/O: Maria hasn't always lived in Victoria, British Columbia. Two years ago, Martha McDougal and Al Hoffman went to Bucharest in Romania to get her from an orphanage. Maria is part of the legacy of dictator Nicolae Ceausescu. Bent on increasing Romania's population, he forced families to have more children than they could support. After his death, tens of thousands of children were found in grim institutions. Hungry and sick, jammed together yet isolated, they were cut off from loving human care. Like some terrible scientific experiment, it has revealed the basis of normal development. Exiled from the human family, denied love, these children were severely affected physically as well as mentally and emotionally. Over the past decade many of them have been adopted into North American families.

Martha: Maria was proposed to us by our facilitator, and what we heard originally over the phone was just that she was a little girl in an orphanage. Her mother was very young and wasn't able to care for her. And then, we went a long time without much more information, and then we did get a video, and the video is actually kind of heartbreaking because you know she's 22 months old, and she's not talking, and she's not walking, and she has a lot of difficulty with her hands, to actually manipulate or hold objects. I think, knowing what a 22-month-old child should look like, it's really heartbreaking. But again, there's a point in the video that you just know that there is something there.

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David V/O: Children connect; they seem to do it naturally. But it's a lesson they learn from love. Interacting with those around us, we learn who we are and how we connect with our world. What happens if we're denied that lesson? Can love repair what lack of love has caused?

I met psychologist Lucy Le Mare in Victoria, British Columbia. Over the past decade, she and her colleagues at Simon Fraser University have been studying children adopted from Romania.

Lucy: The goal of the study was really to take advantage of a very tragic situation that allowed us to take a look at the impact of early deprivation on children's development. In their early lives, they never had that face-to-face interaction with a supportive caregiver. For example, if they're hungry and they'll cry and cry and cry and nothing happens -- their needs aren't met. So they develop a set of expectations and understandings that their needs, when they have them, will not be met. The kid whose needs aren't met has no sense of there being any security or any safety. They continue to seek that safety, but they don't get it, and they don't find it.

Al: Maria, do you want to put on your lamb suit? Oh look, you got baby -- baby's in a carriage.

David V/O: Little by little, over the past two years, Maria has been learning what it means to be connected.

Martha: Do you know Maria, when you were a baby, you used to ride in that carriage; do you remember that? You were just teeny, teeny, teeny.

Initially, you know, the things that really mattered for her were that she had food; she had a place to sleep; and she had a home, and that was really very clear that those sort of basic needs she needed to know were met. And then, you could watch her. Then we became important; then we became a family. And we weren't just the providers of the food and the diapers and the pen. We were always there -- we weren't going away -- and we loved her, no matter what, and then she started to reciprocate that. And it was pretty amazing to watch that happen.

Al: Do you want to try on your zebra suit?

Maria: No!

David V/O: Maria and her family are getting ready for the Christmas pageant at their church.

Al: [Laughing] you have to put your head out the hole. It's on backwards. There we go! Yah! Look at that!

Lucy: When you consider where these kids came from and what their early lives were like, and you look at them now, it's an amazing story of resilience, of family commitment.

David: But we can turn it, as well, and say that this terrible, terrible experiment, which was never a deliberate experiment, has provided us with information about the incredibly important role of love.

Lucy: Well, I think that it tells us that, when you take a child out of these horrific conditions and put that child into a warm and caring and supportive family, that child has the capacity to flourish and grow in that environment.

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Martha: I have no idea what she may want to do or become. But I do think she's made an impression on a lot of people where they sort of watched her develop already and sort of blossom into a beautiful young girl who's really quite interested in talking to people and going up and playing with them.

Al: I've just been overwhelmed by the resilience of her spirit -- and through all that she's been through and spending a year and a half in an institution and all those losses that she's experienced so far in her life-- [by] the way she's rebounded in her own way and become such a beautiful, active little girl.

David V/O: The power of love holds families, friends, communities together. And it also ties us into a much wider world. That's what I've found when my grandson Tamo and I go fishing together.

David: When you throw it, whip it, hold it down here like this and then go like this [laughs]. I knew that that was going to happen!

David: OK, you caught it; you get to eat it first. It's pretty bony. How is it?

Tamo: Good.

David: Is it good because you caught it, or is it

David V/O: Here's a kid that has grown up with all of the modern accoutrements . He's got a computer, he surfs the net. He's e-mailing me all the time. And yet, to take him out into nature, my great touchstone, and see that the magic is still there for him, is an incredible reaffirmation to me; that the contact with nature is very, very profound and it hasn't been lost.

Tamo: I liked dinosaurs when I was younger. I liked reptiles and amphibians. That snapping turtle was pretty neat.

David: Wasn't that neat? Wasn't that neat? I think, we often teach kids to be afraid of things -- we say, oh don't touch that it might bite you. And then they get scared, but then they find out that it's not that scary.

David V/O: Beyond the human family, love binds us to the rest of the living world. The great American naturalist Henry David Thoreau wrote, "A lake is Earth's eye; looking into it, the beholder measures the depth of his own nature." He wrote those lines about Walden Pond, the place he fled to from the city in 1845. Walden Pond, near Boston, is a special place for my old friend E. O. Wilson. Like Thoreau, he comes here to escape the city. He's a Harvard biologist, an international authority on ants. He believes places like this answer a deep human need. He brought me here to show me why.

Ed: Well, this is Walden Pond. And, ah, this particular inlet is called Thoreau's Cove because Henry David Thoreau had his cabin just up that slope. The pond itself goes around a circumference of about two miles. Thoreau realized in his time of reflection that there is a great deal more than just economic welfare; there is nature -- as important for the human spirit as almost anything else.

Let's do some hunting here. I'm a little-organism man, which means I've got so much material right at the feet that I walk just a couple feet into the woods and stay there all day. Just to get a feeling for this, let's try to find some organisms .

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David V/O: Like me, Ed fell in love with the natural world as a child -- combing the beaches and swamps of rural Alabama.

Ed: Always interested to see what s underneath. Now most people would probably say, oh, creepy-crawlies under these things. But listen; what I see under these, these logs, is a whole world . Here is one of the unlimited number of spider species here. Now what I want to emphasize here is that although these are tiny creatures for you and me, they are the giants of this system.

David V/O: Ed Wilson believes that the love we share for exploring the living world is part of human nature in the most profound way.

David: You re saying it s genetic; we re born with that kind of instinctive

Ed: Ooh, Yes. It s part of what I call biophilia, a word that has begun to get some currency. The love of life -- not just the love of life -- but the innate, hereditary tendency to affiliate with life,. to be attracted to it, to like its variety, to enjoy and prefer certain qualities of it. Something I think most of us share very strongly.

David V/O: That s not to say, of course, that all of us love every kind of living thing.

Ed: This is a milk snake.

David: Now are they poisonous?

Ed: No, this is a beauty

David: I have this terrible confession. I ve always had this guilt feeling. When I was ten years old, I was fishing with my dad, and I was going through the bush. And I d never heard a rattlesnake, but I heard this buzz, and I knew what it was. And totally unconsciously, I killed it and ran away. And I felt a guilt about it because it was a Mississauga rattler.

Ed: David, please, give yourself absolution. Actually, that kind of fear for just a few creatures like snakes and bats and spiders, is natural. In fact, it s shared with other primate species, you know, monkeys and apes; without any training on their part, you know, they have this reaction of fear and extreme distaste.

David: Which is exactly what I had; it was just an instant reaction and fear.

Ed: So this is deep in our I suppose it s not too much to say, in our genes. But once you become familiar with these creatures, and this really is an exquisitely beautiful

David: It is beautiful.

David V/O: Thoreau wrote: I came to the woods because I wished to live deliberately, and see if I could learn what it had to teach . and not, when I came to die, discover that I had not lived. You can see it at work everywhere -- our deep, inborn connection with the living world. That s what s celebrated each year in many Christian churches on the feast of St. Francis, the patron saint of animals. This is St. Paul s Anglican Church in London, Ontario. Reverend Terry Dance gave the homily.

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Reverend Dance: St. Francis didn't simply preach to the birds and the animals because he was a little bit crazy. His preaching to the animals grew out of the spirituality in which he believed that, as God's creatures, we are connected to all of God's creation. As God's creatures, we do not exist apart from creation. We are a part of creation.

Blessing given: Gracious God, we thank you for the gift of these creatures of your making and we bless them in their name of the Father, Son, and Holy Spirit, Amen [repeated two times].

David V/O: After the service we spoke to Bishop Howe

Bishop Howe: For Christians, when animals are brought up from the Garden of Eden, there is a context that animals can be in a relationship with God. And so, therefore, an animal is not just a material thing, like a rock that has no feeling and no emotion and no spirit. When you are capable in being in a relationship, then you have a part of you which is non-material, which we may call a spirit or a soul. And that spirit or soul may be different than my spirit of soul, but it is the same purpose; it brings us into relationships.

David V/O: This service is one way of saying to the world that our relationship with the animal kingdom is essential for the future of the human race. Most of us know we like the living world; but it's hard to grasp how much we need it and how much we need to keep it safe.

David: Well, as you know, most of us now, especially in the developed world, live in places like this, in cities. And it's very easy for people to say, well, who needs nature? We've got our cities. What does a biologist answer to that?

Ed: Well, a biologist looks at a city like that and is eager to remind people that that land that they're on does not support them. No matter how comfortable and how efficient a city might be, it's just a .. it's just a structure on top of a very fragile foundation, which is the natural world.

We would have a tremendous psychological deficit if we got rid of most of it. We would enter what I like to call -- it comes after the Mesozoic, the age of reptiles, and the one we're in, the Cenozoic, the age of mammals -- I think we would come into what you could call the Arimozoic, which means the age of loneliness. And we'd never get it back, and we'd really have missed something that really should be thought of as part of humanity -- that is, our relationship with the rest of life, in all its diversity.

David V/O: According to some psychologists, we're already in the age of loneliness, separated from the Earth, and suffering as a result. Harvard Psychologist Sara Conn took me into central Boston at rush hour to show me the symptoms.

David: Here we are in the heart of a major urban area; noise is all around us. How does one relate to the natural world?

Sarah: Well, most people as you notice, don't. They're sort of head down, straight ahead, walking fast from one place to another, and never notice that the natural world even exists. They never notice that there are plants around that they could spend a little bit of time with and calm themselves down and relate to.

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Most people have no experience of that, no inclination to even think of that as they go about their daily lives, so most people spend their time totally disconnected from the natural world.

David V/O: Ecopsychology is a new discipline that sees our inner state as a reflection of the state of the world around us. Sarah Conn helps her students and patients to reconnect with their natural home. She prescribes a few minutes a day in the company of nature. Another kind of therapy involves a guided meditation in a natural area. I have to admit, I was a little uncomfortable at first.

Sarah: We re here today to invite you to go into a meditative state, an opening sensory state, see what calls to you. It s called soul tracking, and it s really following a fascination or something that draws you. So in order to do that, we ll start with just feeling your feet on the ground, and if it feels comfortable, you can close your eyes.

David: Are there ever people it doesn t work on?

Sarah: What?

David: That they don t get into it?

Sarah: Well some people it takes longer. People who are nervous

David: More uptight?

Sarah: Yeah, afraid of being in the natural world, it s harder for them to close their eyes, for instance. So that s fine if they want to leave them open.

David: Um hum.

Sarah: Close your eyes and feel your breath coming in as a way of connecting you to the Earth, to the atmosphere.

David V/O: I m one of those Mr. Rationalities, so letting my hair down is not easy. But the one exercise that I really loved was closing your eyes, trying to feel your body, and you become aware that you re standing on the Earth. Immediately, you become aware of the sounds around. Because when we live in a city, what we try to do is to shut down most of those senses.

Sarah: Then as you continue the breathing, if you can locate for yourself the centre of intuition in your body. When you are ready, you can open your eyes and let the earth surrounding you present itself to you; just let it come to you. And if a part of it draws your attention, invites you to approach it, then do so.

David: The first thing that hit me was the leaves.

David V/O: The leaves of all things for me to be attracted to, the leaves!

Sarah: What do you notice?

David: It s the decay that comes with age it s death. I just hit 65 this year, so I thought a lot about coming to an end. When my father died, he always believed that he would return to the earth and be reborn through the trees and the fish. And of course, that s what these leaves are doing.

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David V/O: Psychology, traditional psychology is really a kind of seeing; you study an animal or a person in isolation, like you want to see what's in their brain and expressed in their behaviour. We've never really considered the surroundings as part of it.

Sarah: We've created what some people call pathological individualism -- the bounded, masterful, self-contained individual -- so that we're cut off from the ground in which we live.

David V/O: The ground in which we live. Building that relationship is how we humans have survived -- even in harsh places like the high Andes. I've come to Peru to meet a long-time friend and learn about that crucial human relationship. This is Cusco, the valley of the sun. It was the centre of the Incan Empire, which stretched from Chile to Columbia. The Incan Empire was destroyed more than 400 years ago. But eight million people still speak the language of the Inca. Inca faces, Inca ways -- still going strong. It may be because they live among the gods.

Human beings are connected to this landscape in a very special way, according to my friend Wade Davis. He's an ethnobotanist, who's been working with the people and the plants of the high Andes for many years.

Wade: This is Pisac; this is one of the most mysterious sorts of fortresses of the Inca

David V/O: Wade first saw this view of the Inca's sacred valley almost 30 years ago. Since then, this area has become his second home.

Wade: I think what impressed me most when I first began to read the anthropological literature and to meet some of the local people was the idea that this really was a sacred place. They weren't speaking in terms of metaphor. Often when you think of sacred landscapes, it's almost metaphorical. Here they really believe the Earth is alive. I mean, that river is not just a sacred river; it is the veins of Pachamama. The Milky Way is its heavenly counterpart. When a shooting star flies it's a bolt of silver and silver is the tears of the moon. That mountain is an Apu. That doesn't just mean it's a symbol of god; it is a god. As long as you're in the shadow of that Apu, it will direct your destiny.

And this is something that people I think don't understand about the relationship of indigenous people in general to landscape. You know, they have forged through time and through ritual a traditional mystique of the Earth that is based not on the idea of being self-consciously close to it but a far subtler intuition, and that is the idea that the Earth itself can only exist because it was breathed into being by human consciousness.

And what that means is that a young Varunacuna lad from the village of Chinchero or from the sacred valley who believes that mountain is an Apu will have a profoundly different relationship to it than a Canadian kid who's raised to believe that that mountain is a pile of ore ready to be mined.

David V/O: Traditional life is still strong in Chinchero, a village of about a thousand people an hour's drive from Cusco.

Wade: Everything works in terms of reciprocal bonds that are never spoken about and never forgotten. And reciprocity takes a spiritual turn in terms of the reverence for the Earth itself, the idea that you can't

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simply plant a field; you must give a blessing to the earth. You can't simply harvest a field; you must bless the tools. You can't simply chew the coca leaves; you must bless the Apus and bless your colleagues, and everything is wrapped up in this relationship of community spirit and landscape.

David V/O: This is one of Chinchero's community fields. Everyone's here to mound the potatoes together. Every activity begins with a ritual sharing of coca leaves. Wade brought a bag of them so we could join in the blessing.

Wade: See what happens is when they give you those three, it's called a kintu; it's called a kintu, and that's a gesture of reciprocity to you, and then when you blow the essence back to the Apus or to the Wacas, you're blowing the essence of leaves back to the Earth, sort of like the rain falling re-forms a new cloud, the essence of the leaf remains eternal.

David V/O: Then it was time for work. They told me humans and nature work together for the best results. Potatoes become toxic if light reaches them, so the soil is piled up around the plants several times in the season.

The women started work yesterday, making the chicha beer. They've been cooking all morning, and now they're bringing the food out to the field.

I've never been offered guinea pig before. But that's what you get when you celebrate in the High Andes.

Wade: What I love here is I feel so much part of the community, you know.

David V/O: The women offered flowers to the field. Then they decorated the men and themselves, and the dancing began. People, potatoes, the Earth's fertility, the drifting rain, even the lake and the mountains, they all seemed to be part of the dance. Meeting the people of Chinchero, I saw how ceremony reconnects them to the sources of life, to the awesome powers that inhabit their landscape.

Wade: To my mind, the real kind of revelation of anthropology, the idea that the world in which we live in, our particular culture, doesn't exist in some absolute sense but is one model of reality, just one possibility, one facet of the human imagination.

And that's an idea that not only fills you with hope, it shows you the absolute importance of cultural diversity. All of these myriad cultures form a kind of intellectual and spiritual and cultural web of life that envelops the planet and is as important to the sustenance of the planet as is the biosphere, the biological web of life.

And you might think of that web of cultural life as the ethnosphere, the sum total of all thoughts, dreams, ideas, myths, beliefs brought into being by the human imagination since the dawn of consciousness.

David V/O: The ethnosphere. Wade made me understand where I've been. For almost a year, I've been travelling through the world imagined into existence by human beings. Everywhere on Earth, we bind

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ourselves together weaving a web of meaning that tells us how to live. That s the genius of our species. So many versions of the human story, each one describes how the world works -- and where we fit in. In every place, we evolve a different story, creating the rituals of interconnection. They re our path back to the living Earth. Now it s time to take this story home.

Airports look the same the world over. It s hard to see beyond the bland surface of technology to what it all depends on. But walking home through Vancouver after my long journey, the city looked different. Everywhere I could see the natural world at work. The air that moves through us moves round the planet. The fountain of life -- that s where we all began, born from water into air. In every living thing we can see the fire of creation, the power of sunlight and soil. In the heart of the city, we re at home in the natural world. We are the Earth. If we can see and feel the web we re part of, we can change the way we act towards it. We all know where home is -- it s with our family, with the living and the dead.

David: See this is a clematis plant. Have you ever seen that beautiful purple flower? When grandma Sue died, I put her ashes on there so every time it blossoms I think of my mom.

Let s go down to the beach.

David V/O: But our family is far larger than we realize. We re at home with one another, in the whole human community and in the biosphere, close relatives of every living thing.

Tamo: Grandpa look!

David: Oh right! Was it sticky? That s great! There s a bunch of shells over there. You see this one here? Have you ever seen one like that? It doesn t belong here, and it s going to slowly move up the beach and push all these other ones out of existence.

Tamo: They re so small

David: I know! They re really strong, for some reason.

David V/O: We re not alone. Nothing exists alone. We re all creatures of the living Earth, held together in the sacred balance.