

Discovery Series

2019-2020
Resource Guide

**RONAN
DONOVAN:
SOCIAL BY
NATURE**



Monday, April 20, 2020

10:00 a.m.

Victoria Theatre

Presented by National Geographic Live!

**DAYTON
LIVE**

 **NATIONAL
GEOGRAPHIC** *Live!*

Curriculum Connections

Discovery Series

Welcome to the 2019-2020 Discovery Series at Dayton Live. We are very excited to be your education partner in providing professional arts experiences to you and your students!

Ronan Donovan shares his amazing adventures in places like Uganda, Africa and Yellowstone National Park in *RONAN DONOVAN: SOCIAL BY NATURE*. Students will get a first-hand account of the lives of wolves, chimpanzees, and mountain gorillas. They will learn about the different habitats these animals live in and how humans affect their lives. Ronan Donovan will also bring to attention the effects of deforestation and the effects it generates for chimpanzees. We hope your students enjoy this inside look into the animal kingdom.

The information and activities in this resource guide have been carefully crafted to help you and your students explore the many ways a live theatre experience can open up learning opportunities. Grade level icons will help you determine which activities are good for students, too. And don't forget to take advantage of the local resources listed inside to extend the play-going experience and make even more curricular connections for you and your students. Thank you again and welcome!

The Education & Engagement Team



You will find these icons listed in the resource guide next to the activities that indicate curricular connections. Teachers and parents are encouraged to adapt all of the activities included in an appropriate way for your students' age and abilities. *RONAN DONOVAN: SOCIAL BY NATURE* fulfills the following Ohio and National Education Standards and Benchmarks for third through twelfth grade.



Ohio's New Learning Standards Related to *RONAN DONOVAN: SOCIAL BY NATURE*

Science: Interactions within Habitats, Behavior, Growth and Changes, Interactions within Ecosystems, Species and Reproduction

Social Studies: PLACES AND REGIONS

English: RL.3.7, RI.4.3, RL.5.7

Arts: TH:Re7.1.3.a, TH:Re7.1.4.a, TH:Re7.1.5.a, TH:Re7.1.6. a, TH:Re7.1.8.a

This resource guide was created by Natalie Katona. All activities are available for distribution and use in the classroom or at home.

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About the Play



Born in rural Vermont in the house his father built, **Ronan Donovan** has spent his adult years immersed in the natural world. A biologist turned photographer and filmmaker, he spent 2011 in the forest canopy studying wild chimpanzees in Uganda, Africa for Harvard University. The experience inspired his desire to use visual storytelling to reach a greater audience. Ronan's photographic journeys for National Geographic magazine include an entire year living inside Yellowstone National Park documenting the life of wild wolves, covering the human-wildlife conflict between wild chimpanzees and humans in Africa, and hiking volcanoes to photograph mountain gorillas.

Spotlight on Ronan Donovan



Ronan Donovan inherited his love for the natural world from his parents. He and his brother were raised near the forests of New England and it was there they fostered a love of exploring and a curiosity for the living world. His biology background has brought him to Uganda to study the life of chimps among fig trees in the Kibale National Park. Once there, his photos of the chimps in their natural habitat caught the attention of Tim Laman, a well-known wildlife photojournalist. That connection gave him his introduction to National Geographic's senior editor, Kathy Moran. It was through her that he found himself in Yellowstone National Park to cover the lives of gray wolves. Donovan is self-taught in the technical aspects of photography and filmmaking and honed his craft during his wildlife biology projects. He eventually let go of his biology career in 2013 and focused on photography and filmmaking full time. His goal is to use his craft to raise awareness of the impact humans have on wildlife.



Ohio Spotlight



Ohio Wildlife Center

Columbus is home to the Ohio Wildlife Center. The wildlife center is a volunteer-driven, nonprofit organization that has been in existence for over thirty years. During those years, their mission has been to foster an awareness and appreciation of Ohio's native wildlife through education, rehabilitation, and wildlife health studies. The center offers a variety of on-site educational programming for groups, classes, or organizations. They have wildlife encounters, tours, and a program dedicated to the different seasons of the year. They also offer family hikes and different programs throughout the year that are open to the public. You can learn more about the programs of the Ohio Wildlife Center at <https://www.ohiowildlifecenter.org/>.

Pre-Show Conversation Starters



RONAN DONOVAN: SOCIAL BY NATURE is a program that promotes the understanding of how humans have an impact on the lives of wild creatures such as wolves, gorillas, and chimpanzees. Before seeing the show, discuss the following questions:

- 1) What prior knowledge do you have of wolves, gorillas, or chimpanzees?
- 2) Is there anything you wonder about the above animals?
- 3) What are some ways humans interact with the natural world that has a positive impact on animals and plant life?
- 4) What are some ways humans interact with the natural world that has a negative impact on animals and plant life?
- 5) How can you be part of the solution when it comes to the negative impact humans have on the natural world?

Ronan Donovan's Travels



Ronan Donovan's career in photography and filmography has taken him to different areas of the world. Here are some of the fascinating places he has visited!



Uganda, Africa

Geography: Uganda is located on the East African Plateau. It is home to one of the largest lakes in the world, Lake Victoria. The landscapes of Uganda vary from plateaus, hills, a few low, and low mountains. There are grasslands and tropical forests in the central region and volcanic foothills in the east.

Animal Life: The African Elephant, antelopes, cranes, cape buffalo, chimpanzees, golden monkeys, hippopotamus, leopards, lions, chameleons, crocodiles, giraffes, hyenas, and warthogs are common animal life you will find in Uganda.

Plant Life: Includes mango trees, jackfruit, orange trees, magnolia trees, and elephant grass.



Rwanda, Africa

Geography: The central and western regions of Rwanda are covered by the Albertine Rift Mountains. As you move eastward into the country, the geography changes to forests, savannahs, plains, and swamps. Several lakes are contained in the country and Lake Kivu is the largest.

Animal Life: Mountain gorillas, chimpanzees, colobus monkeys, giraffes, elephants, African clawed frog, and buffalo are some of the common animals found in Rwanda, Africa.

Plant Life: Includes eucalyptus trees, Acacia trees, coffee shrubs, bamboo, and grasses.



Yellowstone National Park, United States of America

Geography: Yellowstone National Park is mostly contained in Wyoming. However, areas of the park reach into Montana and Idaho. The park sits on a geological hot spot and has hot springs and geysers within the park. Yellowstone Lake is the largest lake and the largest river is the Yellowstone River. It also has forests and canyons contained within the park.

Animal Life: Bison, elk, mule deer, black bears, foxes, coyotes, woodpeckers, geese, and rattlesnakes are some of the common animals found in Yellowstone National Park.

Plant Life: Includes lodgepole pines, whitebark pines, Douglas firs, cottonwood trees, phlox, lupines, and larkspurs.

Grey Wolf Profile



Name of Animal: Grey Wolves

Location they were studied:

Yellowstone National Park, United States of America

Population: As of April of 2019, Yellowstone National Park had 61 wolves divided into 8 packs



Characteristics/Behaviors:

- Large dog-sized canine, about the size of a German Shepherd
- Bushy gray fur
- Pack animal, live in groups of 4-7 wolves
- Scavengers- animals that will eat dead animals in addition to hunting prey
- Highly intelligent animal, each wolf in the pack plays a role and has their own personality
- Howls are used to communicate between members of the pack and to other neighboring packs
- Will hunt the weakest or oldest animal within a group
- Can eat 20 pounds of meat in one meal

Diet

- Elk, Moose, Deer, Bison

Threats

- Conflict with humans over livestock
- Habitat loss through deforestation
- Food scarcity (lack of food)
- Loss of legal protections and low priority on the endangered species list



Mountain Gorilla Profile



Name of Animal: Mountain Gorillas

Location they were studied:

Rwanda, Africa

Population: As of May of 2018, the number of Mountain Gorillas in Africa is 1,404



Characteristics/Behaviors:

- Dark skin and black to brown-grey hair, silverback gorillas will have more silver-grey across their back
- Live in the tropical rain forest
- Largest wild primates
- Average adult females are 5 feet tall and weigh 158 pounds
- Average adult males are 5 feet tall and weigh 485 pounds
- Have 32 teeth, the same as humans, and teeth are large and sharp to help break down vegetation
- Muscles in the arms are larger than leg muscles
- Larger stomach than chest
- Live in families, there are 10-15 members in each gorilla family
- Interact with one another through feeding, chest thumping, and grooming
- Close relatives to humans

Diet

- Bamboo
- Roots
- Shoots
- Fruit
- Wild Celery
- Tree Bark



Threats

- Habitat loss due to deforestation
- Hunted by humans for meat and trophies
- Diseases brought into the habitat by humans

Chimpanzee Profile



Name of Animal: Chimpanzees

Location they were studied:

Uganda, Africa

Population: As of the year 2019, 172,000-300,000 chimpanzees remain in the wild. Due to the large spread of the chimpanzee population, it is difficult to get an accurate population count.

Characteristics/Behaviors:

- Thick bodies with short legs
- Opposable thumbs
- Arms are 1.5 times their height that extend beyond their knees
- Long black hair covers their body; their face, ears, and toes are bare
- Communities of chimps can range from 10-100 chimps
- Observed using medicinal plants for ailments
- Problem solvers and can make and use tools
- Show a great deal of curiosity and can learn behaviors and skills
- Interact with one another through touching, kissing, holding hands, and grooming

Diet

- Termites
- Smaller monkeys
- Fruits
- Seeds
- Nuts
- Leaves
- Flower blossoms
- Honey



Threats

- Habitat loss due to conversion of the land for agricultural purposes
- Exotic pet trade
- Hunted by humans for meat and trophies
- Diseases brought into the habitat by humans

Track your Impact on the Earth



Name _____

Track the different ways you interact with your environment by paying attention to the water you use, how often you're using electricity, and what you're recycling. Use the calendar below to fill in your personal data for your impact on the environment.

Remember for water use:

- Taking a shower uses **50 gallons of water**
- Taking a bathe uses **40 gallons of water**
- Brushing your teeth with the water running uses **2 gallons of water**
- Brushing your teeth with the water off uses **0.25 gallons of water**

Remember for electricity use:

- Microwaves use **0.12 kWh per 5 minutes**
- Televisions use **0.48 kWh per hour**
- Video games use **0.2 kWh per hour**
- Lights use **0.1 kWh per hour**

	Water Use (Gallons)	Electricity Use (kilowatts)	What I Recycled
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Then, analyze you impact on the environment you have by answering these questions:

- In what ways are you being a responsible Earth citizen?
- Where is the most waste coming from in your home?
- What can be negative consequences of your waste?
- What are some ways you can improve your impact on the earth?

Animal Travels Passport



Name _____

RONAN DONOVAN: SOCIAL BY NATURE tracks Donovan's travels around the globe where he encounters amazing animals. Choose three of your favorite animals "wild" to research. Below is a passport where you can track your findings. In the square, draw or paste a picture of the animal you researched. Then, write about the information you gathered about the animal.

PASSPORT

Habitats Found: _____

Description: _____

Threat: _____

Conservation Happening: _____

PASSPORT

Habitats Found: _____

Description: _____

Threat: _____

Conservation Happening: _____

PASSPORT

Habitats Found: _____

Description: _____

Threat: _____

Conservation Happening: _____

Conservation Awareness Poster



Name _____

Materials:

- Poster board, one per student
- Markers, crayons, colored pencil
- Conservation Fact Sheet, one per student

Poster Elements:

- 1) Choose a conservation awareness subject: water, energy, forest, or animal conservation.
- 2) Research different statistics, facts, or tips on how to be successful on your specific conservation type.
- 3) Write down five conservation facts you can include on your poster in the space provided.
- 4) Design your poster! Use a catchy slogan at the top of the poster to raise awareness on why your chosen conservation type is important. Include your five facts on the poster as well as illustrations.

Different Conservation Groups to Research

- Water: Ohio River Foundation, Healthy Water Ohio, Ohio Environmental Council: Great Lakes
- Forest: Friends for the Preservation of Ohio State Parks, Dayton Audubon Society, The Nature Conservancy
- Energy: Green Energy Ohio, Dovetail Solar, Green Umbrella: Regional Sustainability Alliance,
- Animal: The Wilderness Center, The Western Wildlife Corridor, Ohio Nature Education

Your Five Facts

1 _____

2 _____

3 _____

4 _____

5 _____

Resources for Students and Adults

Books for Students about Conservation and the Environment:

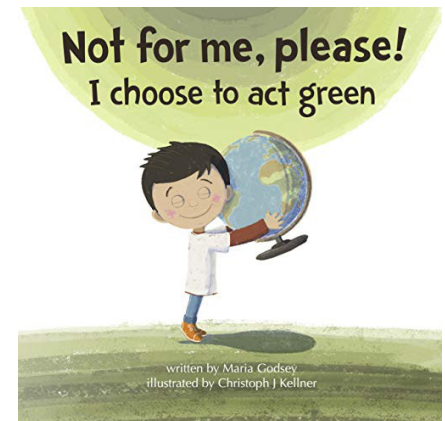
Not for Me, Please! I Choose to Act Green, Written by Maria Godsey. Illustrated by Christoph J. Kellner. CreateSpace Independent Publishing Platform, 2018.

What a Waste: Trash Recycling, and Protecting our Planet, Written by Jess French. DK Children, 2019.

Heal the Earth, Written by Julian Lennon and Bart Davis. Illustrated by Smiljana Coh. Sky Pony, 2018.

Pesky Plastic: An Environmental Story, Written by Leticia Colon De Mejias. Illustrated by Tamara Visco. Great Books 4 Kids, 2013.

Water, Water Everywhere! Stop Pollution, Save Our Oceans, Written by Pfiffikus. Pfiffikus, 2016.



Publications for Teachers and Parents:

Wolf Nation: The Life, Death, and Return of Wild American Wolves, Written by Brenda Peterson. Da Capo Press, 2017.

Mountain Gorillas: Biology, Conservation, and Coexistence, Written by Gene Eckhart and Annette Lanjouw. Published by John Hopkins University Press, 2009.

The New Chimpanzee: A Twenty-First Century Portrait of our Closest Kin, Written by Craig Stanford. Harvard University Press, 2018.

Yellowstone: A Journey Through America's Wild Heart, David Quammen. National Geographic, 2016.

The Impenetrable Forest: My Gorilla Years in Uganda, Written by Thor Hanson. 1500 Books, 2008.

Websites for Teachers and Students:

<https://vimeo.com/247146646>- A video of Ronan Donovan at the Fuller Symposium giving a lecture called "Empathy through Photography." This lecture focuses on how to use images and film to make people empathize with a subject and then engage in conversation.

<https://omahaperformingarts.org/about-us/blog/opa-blog/2019/02/18/get-to-know-5-questions-with-photographer-ronan-donovan/>- An interview with Ronan Donovan by Courtney Matter for the Omaha Performing Arts.

<https://vimeo.com/247171663>- A moderated discussion featuring Ronan Donovan on the topic of the science and potential impact of using visual communications to create behavior change for conservation.

Victoria Fuse's Local Resource



For more than 50 years, Five Rivers MetroParks has been connecting people with nature. Therefore, protecting open space and natural areas is at the heart of the mission of MetroParks, which protects nearly 16,000 acres of forests, grasslands, farmlands and wetlands. Conservation efforts focus on river corridors and areas surrounding our parks, preserving habitat on the largest scale possible so that wildlife, flora and fauna have better places to live and thrive. A way Five Rivers MetroParks engages with the community in their effort for conservation education is with the program Conservation Kids. This program is designed to a chance to discover nature, learn how to protect it, and then giving them guidelines on how to evaluate the impact of their work. There are four tiers to this program: Discovery, Act, Share, and Protect. If you would like to have your students partake in the program, visit <https://www.metroparks.org/conservation-kids/> for more information.



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EDUCATION PROGRAMS**

EDUCATION PROGRAMS

- Broadway Camps & Intensives
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OTHER BROADWAY PROGRAMS:

- Background on Broadway
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Behind every great National Geographic story there is a great storyteller: the writers, photographers, filmmakers, scientists, explorers, and adventurers who bring the world home. National Geographic Live presents these storytellers on stages worldwide. The speaker series began in 1888 with explorer John Wesley Powell who gave a presentation on the physical geography of the United States. Now, National Geographic gives a platform to photographers, explorers, journalists, scientists, filmmakers, and many other innovators who want to share their stories and findings. To learn more about the other programs National Geographic Live! Offers please visit: <https://events.nationalgeographic.com/>.

DON'T FORGET

All schools that receive scholarships for a show and/or transportation are asked to create thank-you letters or cards for our sponsors. Please address your students' thank-you notes to:

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