



# ONE PLANET

## Key Takeaways:

- When humans built their first settlements, the world was full of life—on land and in the sea. But with the human population rapidly increasing, so is the misuse of our planet's resources. Our presence on this planet has caused a 60% decline in populations of mammals, birds, fish, reptiles, and amphibians in just over 40 years.
- All life depends on water. The irregularity of rains, caused by climate change, is posing challenges all over the world. If rainfall is more predictable and certain, life can flourish.
- About 90% of life in the ocean is found in the shallow seas close to the coasts. These areas also absorb heat and carbon dioxide from the atmosphere and are vital in the fight against climate change.
- Although the poles seem remote, their stability is crucial to all life. The sea ice that surrounds the poles reflects sunlight back into the atmosphere and helps protect the Earth from overheating. This sea ice is disappearing as these areas continue to warm faster than any other part of the planet.
- Nearly 300 million people and eight out of ten land-dwelling species live in forests. Forests provide a vast array of resources to all of us, including food, habitat, medicine, fresh water, and the air we breathe.
- The stability of life relies on the connection between habitats. The biomes across our planet connect to one another, so the health of one will affect the health of others. In order for all life around the world to flourish, we need to improve the health of all ecosystems – from forests and oceans to grasslands and polar regions.
- Never has it been more important to understand how the natural world works. With our help, the planet can recover. What we do in the next 20 years will determine the future for all life on Earth.

The Milky Way sets through the Tres Marias, or Three Marys rock formation, in the Valle de la Luna in Chile's Atacama desert.

## GUIDED DISCUSSION PROMPTS

Use these prompts to generate a class or small-group discussion based on the Our Planet – Intro episode or on videos on [ourplanet.com](http://ourplanet.com).

- 1** Everything on this planet is interconnected. The health of one ecosystem can have effects that ripple across other ecosystems. How is this possible? How could species living in one environment be impacted by what's going on in a completely different environment? Discuss how different biomes can be connected, using examples from the episode. Propose a follow-up challenge of researching different biomes and the ways their health is connected to one another.

Examples from the episode:

*Deserts and oceans appear to be far from one another with little in common, but in fact, they're connected in an interesting way. Water from the open ocean evaporates into clouds that travel and eventually empty the water onto the land, creating much-needed sources of water in desert areas. Meanwhile, winds from the desert sweep up billions of tons of dust into the sky, at least a quarter of which falls into the ocean and provides nutrients for marine life.*

*The seas surrounding the Peruvian coastline are some of the richest seas on Earth. The richness of these waters is due to the Humboldt Current, a highly productive current that flows along the western coast of South America, bringing large numbers of fish. Daily migrations of about 5 million seabirds, such as cormorants and boobies, flock to these waters to breed and feast on anchovies. With climate change severely impacting the glaciers of the Antarctic and Arctic, sea ice is melting and adding more fresh water into the oceans. This extra water affects sea levels, salinity, and currents, including the Humboldt. If the poles continues to melt at such speeds, the stability of the Humboldt current will deteriorate, as will the seabird population that depends on it.*

- 2** Across ecosystems, patterns of interactions between species develop. Although the species involved may differ, the types of interactions remain consistent. This episode showed examples of different relationships between species existing in a variety of ecosystems. Describe some of these relationships you saw. What threats do each of these species face? How does the future of one impact the future of the other? How could we use these relationship patterns to ensure these species have a future?

Examples from the episode:

*In tropical rain forests, orchid plants capture orchid bees and glue pollen sacs onto their backs, which the bees then carry to other plants, helping them to pollinate. In return, the plant covers the bees in a perfume that helps them attract mates.*

*Algae that flamingoes feed on remain dormant in the desert dust of Africa. When the rain comes, the algae resurface, allowing the flamingoes to feed and lay their eggs. Flamingoes rely on the algae, and the algae depend on the rainfall.*

*Wolves and caribou are some of the only species that can survive the winters in the boreal forests of North America. Wolves live in these forests year-round, while caribou merely pass through on their way further north. The wolves depend on the migration of caribou as a primary food source in the winter.*



## GUIDED DISCUSSION PROMPTS

**3** With the various human-induced threats facing our planet, including climate change, deforestation, and pollution, species all over the world are feeling the impacts differently. Some of the species most heavily affected are those who migrate between environments. These species rely on their habitual or seasonal migration patterns to feed, breed, or take shelter. Discuss examples from the episode of migrating species. What is putting their migration patterns and survival at risk?

Examples from the episode:

*Grazers, such as wildebeest, are always traveling, following the rains to find fresh grazing. The future of these species' migration depends on rain and grassland availability.*

*The boreal forests of North America are a crucial refuge for the species that are able to survive here, such as caribou. Each spring, the caribou leave the forests and head north toward the tundra to give birth. However, their migrations aren't what they used to be – the herd has decreased by 70% over the past 20 years.*

**4** Ice on both land and sea serves a variety of purposes. Share and discuss the different examples provided in the episode. What is currently happening with our planet's ice? How is human activity affecting the ice? If the ice disappeared, how would it impact the rest of the world?

Examples from the episode:

*Polar bears specialize in hunting seals out of frozen ocean, which is now literally melting beneath their feet. Sea ice breaks up every year and is now happening earlier and earlier in the year, causing the bears' hunting season to be shorter and shorter. Cubs are growing up underweight, which decreases their chance of survival.*

*Glacier ice and sea ice in Greenland reflect the sun and prevent Earth from overheating. Over the last 20 years, Greenland has been losing ice, and the rate of loss is accelerating. In addition to the ice falling from the top of the glacier, ice from beneath the surface breaks away and creates colossal tidal waves. Glaciers are breaking apart twice as fast as they did ten years ago, causing salinity levels to change, currents to be disrupted, fresh water to empty into the ocean, and sea levels to rise.*

**5** What is biodiversity and why is it important? What does an ecosystem's biodiversity tell us about the overall health of that environment?

**6** What can we do to help our planet? What small changes could we make in our everyday routines that could greatly impact our future and the future of species and biomes?



## ACTIVITIES

ACTIVITY IDEA	SUBJECTS
Create a climate timeline and understand just how many components of an ecosystem are affected when climate is altered.— <a href="#">Climate Trackers</a>	Science
Understand how our daily uses of energy are connected to the future of polar bears through cause-and-effect modeling.— <a href="#">What's the Connection?</a>	Science
Conduct a research project that outlines the benefits of using renewable energy versus energy originating from fossil fuels. Present your research in the form of a persuasive argument as if your objective is to convince a panel of government officials.	Language arts
Start a movement in your school to help protect our frozen worlds by saving energy. Conduct an energy audit at your school and propose a plan to your school administration of ways to improve current sources of energy expenditure.	Social studies
Itemize your daily water expenditure and strategize on how to improve it when given a water budget.— <a href="#">A Drop in the Bucket</a>	Math
Compose a poem using metaphors and similes to describe the importance of free-flowing rivers.— <a href="#">Like the River Flows</a>	Language arts
Think twice about throwing food out by learning how much water it took to make that food and creating a pictograph representation of your lunch.— <a href="#">How Much Water Is in Your Lunch?</a>	Math
Use the <a href="#">Free-Flowing Rivers app</a> to interact with nature and use augmented reality to discover the importance of free-flowing rivers.	STEM
Perform an audit at your school or home to analyze water usage and determine strategies for conserving water.	Social studies
Write a persuasive letter outlining the benefits of coastal seas and demanding their protection.— <a href="#">A Need for the Seas</a>	Language arts
Perform an audit in your school or classroom to discover just how many everyday products come from forests and sign the Forest Stewardship Council (FSC) pledge.— <a href="#">Trees and Tigers</a>	Social studies
Get to know your local forest by exploring with a notepad and/or camera and trying to identify as many species as possible using the SEEK iNaturalist app.	Science
Research the impacts of single-use plastics and propose environmentally friendly alternatives to the administration within your school or community.	Science/social studies
Create a public service announcement that will raise awareness about wildlife crime and how to speak up for animals that have no voice.— <a href="#">Be the Voice</a>	Language arts
Use what you've learned about how our food practices impact the health of our planet to write a letter to a future pen pal about Earth.— <a href="#">Eating Our Planet</a>	Language arts
Bring the challenge and importance of reducing food waste to life by measuring what's getting thrown away in your own cafeteria.— <a href="#">Be a Food Waste Warrior</a>	Science



## What We Can Do:

- Don't be wasteful—buy only as much food as you need and eat it all. In the US we waste nearly half of the food we buy; this wastes all the energy that went into producing it, and the food often ends up in a carbon-emitting landfill. Also, understand your personal impact on our planet's water supply, and avoid being wasteful of water.
- Encourage smart shopping—be sure to look for the FSC logo on wood and paper products, and when buying seafood, make sure to look for a label indicating it came from a fishery or farm that has been certified as meeting environmental sustainability standards that protect both wildlife and communities. Don't be afraid to ask a shop or restaurant where their seafood or forest products come from.
- Switch to renewable energy—if you own your house, you can check out solar panels or ask your utility to switch you to renewable energy. Many utilities can make the change with little to no effect on your bills.
- Change the way you move—walk, ride bikes, carpool, or take public transit. Doing one of these even once more per week helps.
- Plant trees—start an effort within your school or community.
- Be aware of illegal wildlife trade—poaching is a major threat to wildlife; never buy products that come from elephants, tigers, gorillas, or other endangered species.
- Watch your trash—don't throw litter anywhere except in proper waste containers. Always attempt to recycle or repurpose items when possible, especially plastic. Avoid single-use plastic items such as straws and bags.
- Enjoy nature—go out and enjoy your local forests, waterways, and coastlines; just remember to leave them as you found them!
- Spread the word—talk more about environmental issues such as fresh water availability, food waste, pollution, deforestation, and climate change. Bring it up to your friends and family, city council, or school. Start holding your leaders accountable for taking action themselves.



## Additional Resources:

- [What is biodiversity?](#)—short web story about why biodiversity is important and the threats facing biodiversity around the world
- [Forests biome WWF webpage](#)—why the health of forests is declining, and why we need to act now
- [What's a boreal forest? And the three other types of forests around the world](#)—explains the difference between boreal, tropical, subtropical, and temperate forests
- [Forests, Climate Change, and the Role Green Giants Play](#)—understand the complex relationship between forests and climate change
- [Oceans biome WWF webpage](#)—why oceans are important, and how WWF is working to protect them
- [7 ways you can help save the ocean](#)—easy tips for how to do your part
- [Understanding grassland loss in the Northern Great Plains](#)—breaks down what's happening in the Great Plains of North America, and why it matters
- [Grasslands habitat WWF webpage](#)—why prairies are important, and the threats they're facing
- [Free-flowing Rivers WWF webpage](#)—colorful answers to questions on the importance of keeping rivers free-flowing
- [Freshwater habitats WWF webpage](#)—species that depend on fresh water, and the threats these habitats face
- [Fresh Water initiative WWF webpage](#)—what WWF is doing to help protect our planet's fresh water
- [Why are glaciers and sea ice melting?](#)—explains why glaciers are important and what happens when they're lost
- [3 things you should know about January's record-low Arctic sea ice](#)—a simple outline breaking down what is happening with sea ice, and the impacts
- [Polar bears and climate change](#)—a full assessment of the vulnerability of these important members of the Arctic to the effects of climate change
- [Arctic habitat webpage](#)—what makes the region unique, and why it's in danger
- [Antarctica ecoregion webpage](#)—information on the region's biodiversity and current health status
- [Polar Regions habitat webpage](#)—why the poles matter
- [Our Planet official webpage](#)