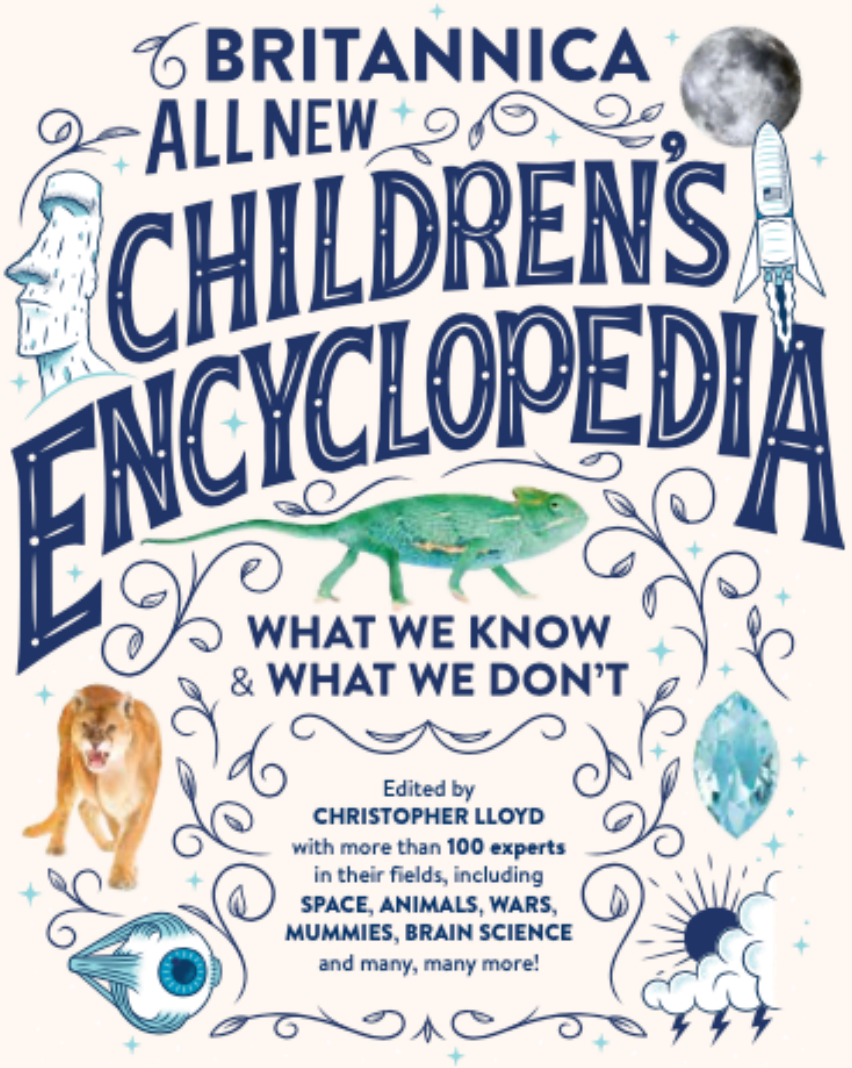
BRITANNICA ALL NEW CHILDREN'S ENCYCLOPEDIA



WHAT WE KNOW & WHAT WE DON'T

Edited by
CHRISTOPHER LLOYD
with more than **100 experts**
in their fields, including
SPACE, ANIMALS, WARS,
MUMMIES, BRAIN SCIENCE
and many, many more!

BRITANNICA BOOKS

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FOREWORD

Encyclopaedia Britannica has been inspiring curiosity and the joy of learning since 1768. This book continues that tradition. It will take you on an amazing journey through all of history and across the Universe. You'll have the opportunity to dive into a black hole (and emerge unscathed!) and take a tour of a medieval castle. You'll also be given the power to peer into the future and learn about what might matter most to us here on Earth. Each time you turn a page, you'll find something new to explore – and, maybe, you'll even be a bit alarmed, like I was, when you run across the section on creepy crawlies ...

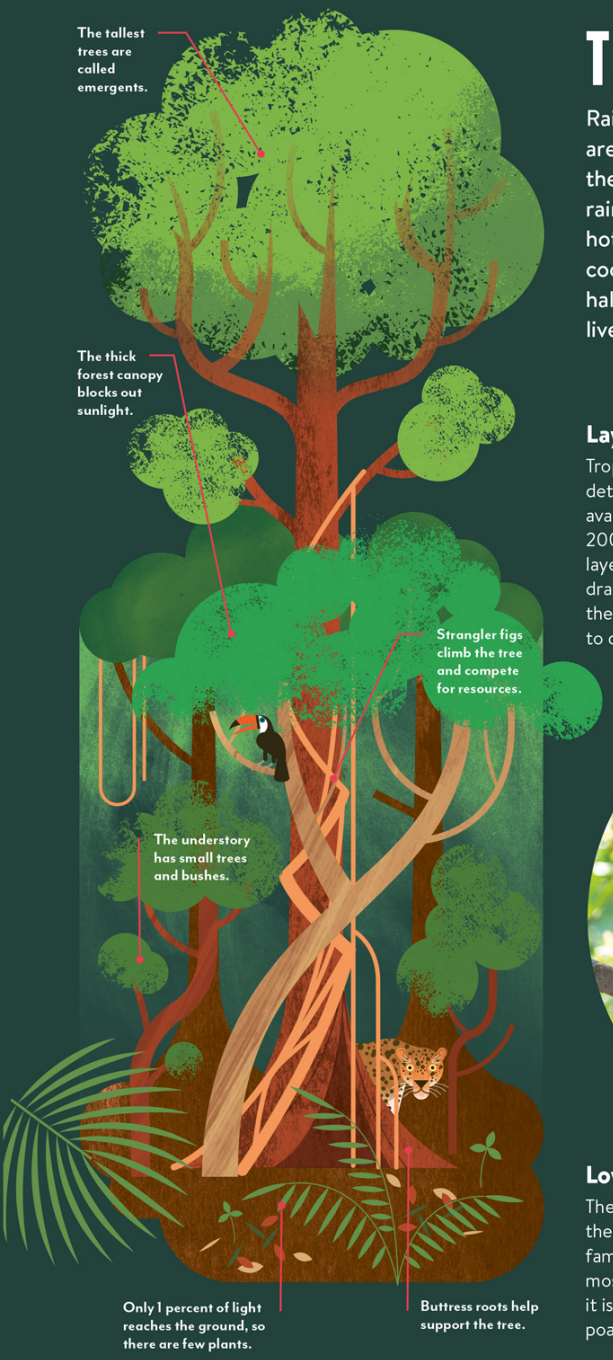
But as surprising and fascinating as each page is, everything we are sharing with you is always subject to change. And that is something that we embrace: watch for sections that describe Known Unknowns. The scholars, researchers, and other brilliant minds who have helped us create this book are the ones who, in their day-to-day lives, are shaping the boundaries of knowledge. They're driven by their passion and their dedication to accuracy and, because of that, they're helping all of us better understand the world. And that includes understanding what we don't know yet.

We believe that facts matter, and we strive for accuracy through rigorous fact-checking of all the information we share, including on every page of this book. Through its more than 250 years of existence, Encyclopaedia Britannica has been committed to enquiry and exploration, working with experts and driving innovation. That's why it's a great honour to be launching Britannica Books, a collaboration between Britannica and What on Earth Publishing, with Christopher Lloyd and this brand-new encyclopedia.

J. E. Luebering
Editorial Director
Encyclopaedia Britannica

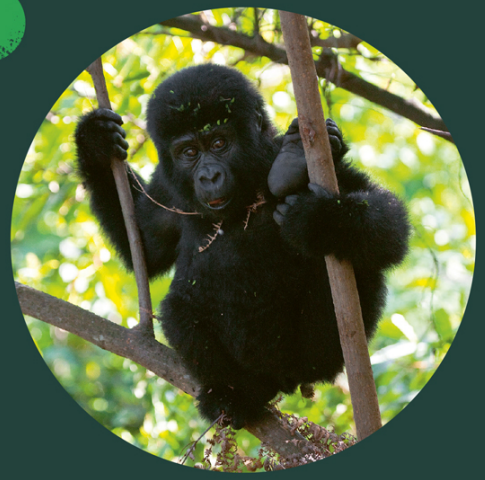
THE RAIN FOREST

Rain forests are found in parts of the world that are very wet. They absorb carbon dioxide from the atmosphere and produce oxygen. Tropical rain forests such as the Amazon rain forest are hot and humid, while temperate rain forests are cooler and often next to the coast. More than half of the world's species of plants and animals live in rain forests, where food is plentiful.



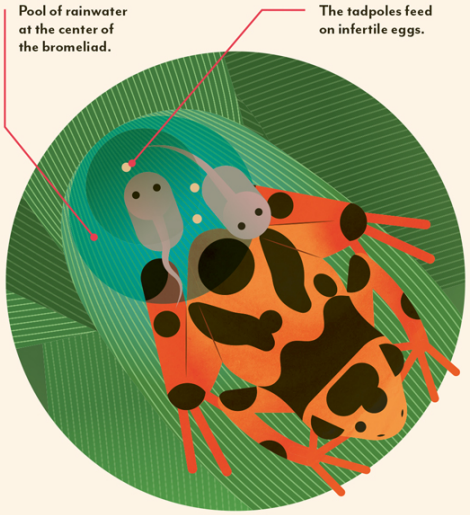
Layered habitats

Tropical rain forests have distinct layers, which are determined by the amount of light and moisture available. The tallest trees can achieve heights over 200 feet (60 m). They emerge from the dense canopy layer, where the leaves of the trees have "drip tips" to drain away water. This helps stop algae from forming. In the dark understory below, the plants have large leaves to capture the little light that gets through the canopy.



Lowland gorilla

The western lowland gorilla lives in the Congo rain forest, the second largest rain forest on Earth. It lives in small family groups led by a male, the silverback, and eats mostly plants. Even though the gorilla is large and heavy, it is a good tree-climber. The loss of its forest habitat and poaching are threatening its existence.



Poison frogs

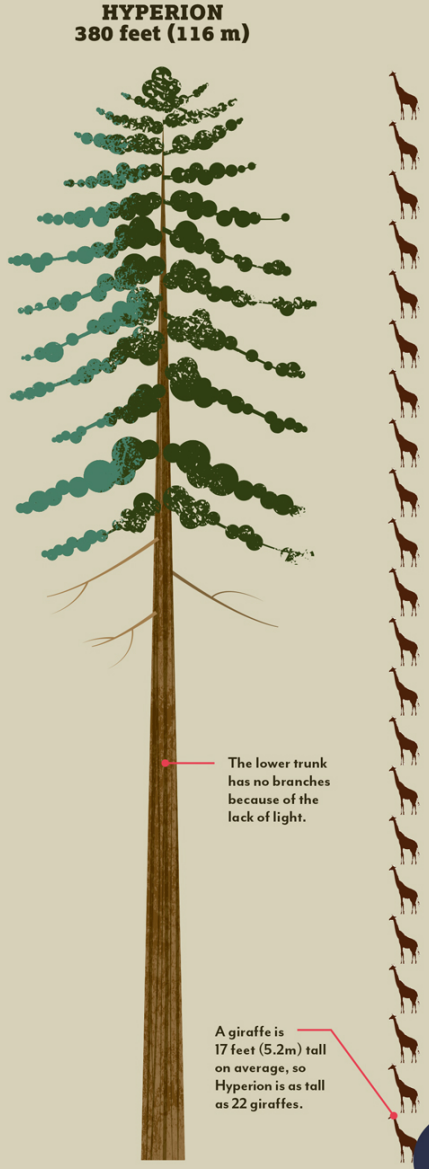
South American poison frogs live mostly on the forest floor and in the understory plants of the Amazon rain forest. Their bright colors warn birds and monkeys that they are highly poisonous. They are good parents. The female lays her eggs on land. When the tadpoles hatch, the male carries them on his back up to the high forest canopy. There he puts them in tiny pools that form on plants called bromeliads and protects them as they grow.

FACTastic!

The golden poison frog, only about 2 in (5 cm) long, is one of the most poisonous animals on Earth. The skin secretions from a single frog could kill 10 people. Frogs reared in captivity tend not to be poisonous. Scientists believe this is because the frog does not make its own poison but acquires the chemicals from its natural food—tiny beetles and ants.

High and mighty

The biggest trees in the world are the redwoods and giant sequoias that live in rain forests along the West Coast of the USA. They are the tallest trees, and their trunks have some of the largest diameters. The tallest living tree is currently a redwood called Hyperion—the "High One"—in Redwood National Park, which is 380 feet (116 m) tall.



EXPERT: Greg Nowacki **SEE ALSO:** Plants, Animals, and Fungi, p.164–65; Bugs are King, p.168–69; Environmental Challenge, p.374–75; Climate Change, p.380–81

CORAL REEF CRISIS

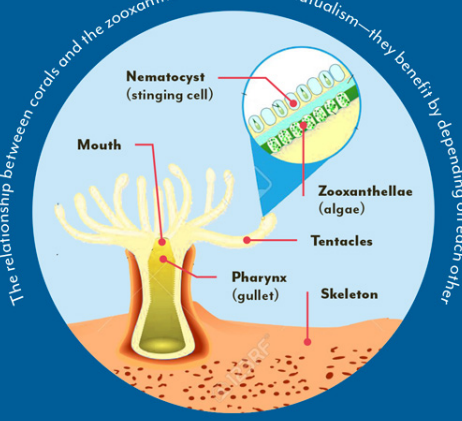
Tropical coral reefs are the rainforests of the sea. They teem with all kinds of life. Algae called zooxanthellae live inside the corals, providing them with food, and giving them their color. Corals like seawater at a temperature of 73–84°F (23–29°C). If it gets any warmer, the corals show signs of stress. They eject the algae, and so lose their color, a process called bleaching. Warmer seas caused by a changing global climate are making some coral reefs turn a ghostly white.

This zebra surgeonfish depends on the algae found in a healthy coral reef for food, as do lots of other fish, turtles, snails, shellfish, and sponges

This coral has lost its algae and all we see is its white skeleton. Coral bleaching events happen more often than in the past. Scientists fear temperatures are rising faster than the coral can adapt to warmer waters

Feed me!

Corals are animals, not plants. They feed at night, using their tentacles to capture tiny animals called zooplankton, which drift in the water. They sting their prey using special cells called nematocysts. The algae (tiny plants), which live in the coral, add to the coral's diet by using energy from the sun to make food, a process called photosynthesis. In return, the coral provides shelter for the algae.



Corals grow by building coral reefs—giant platforms made from their skeletons. The biggest reef is the Great Barrier Reef off Australia. It is 1,400 miles (2,300 km) long

EXPERT: Janice Lough **SEE ALSO:** Evolution in Action, p.150–51; Ecology: Living Things and their Environment p.162–63; The Big Blue, p.180–81

US Civil Rights Movement

The Civil War ended slavery, but it didn't make African Americans equal with whites in the US. In the South, legal segregation kept black citizens from living, working, playing, shopping, or going to school alongside white people. State and local laws made it difficult for African Americans to vote. Even in the North, African Americans weren't given the same opportunities whites had. After World War II, African Americans organized the Civil Rights movement to demand that they be treated equally. African Americans and their white allies staged peaceful protests around the country (including the 1963 March on Washington shown here). They fought for their rights in court and won important changes. The Supreme Court declared segregation illegal, and Congress passed a series of law protecting voting rights.

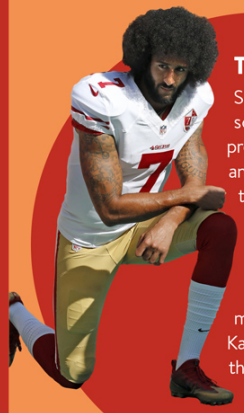
A life of leadership
John Lewis was a seasoned protest leader and chair of the Student Nonviolent Coordinating Committee at the time of the march. He went on to spend his whole adult life advocating for equality, including as a congressman from Georgia.

King's dream
The Reverend Dr. Martin Luther King, Jr. led the 1963 March on Washington, where he gave his famous "I Have a Dream" speech. In it he said that he dreamed his children would live to see a world where people "are judged not by the color of their skin but by the content of their character."

Support from clergy
Many religious groups joined in the Civil Rights movement. Eugene Carson Blake was the executive director of the United Presbyterian Church in the US. Joachim Prinz (two people to the right of Blake) was president of the American Jewish Congress.

CIVIL RIGHTS

Civil rights are an important part of society. They include the right to vote, the right to a fair trial, and the right to an education. In many societies, minority groups are discriminated against, meaning they do not have the same rights as others. This could be because of their gender, race, religion, or other factors. In the 20th and 21st centuries, many groups around the world have taken part in movements to demand their civil rights.



Take a knee

Since August 2016, some US athletes have protested police violence and racism by kneeling during the national anthem before a game. Not standing for the anthem is considered disrespectful, so kneeling draws attention to their message. Football star Colin Kaepernick (pictured) was the first to use this form of nonviolent protest.

EXPERT CONSULTANT: A.N. Expertname **SEE ALSO:** Religious Belief, p.212–14; Slavery in the Americas, p.308–09; Women's Suffrage, p.318–19; World War II, p.324–25

FACTastic!

World War II fueled the American Civil Rights movement. Some 1.2 million African Americans served in segregated units during the war—many with distinction. The Tuskegee Airmen flew 1,578 missions, destroyed 261 enemy aircraft, and won more than 850 medals. After the fight to end Nazi racism, racism at home seemed crueler than before and more important to stop.

GAME CHANGER

NELSON MANDELA

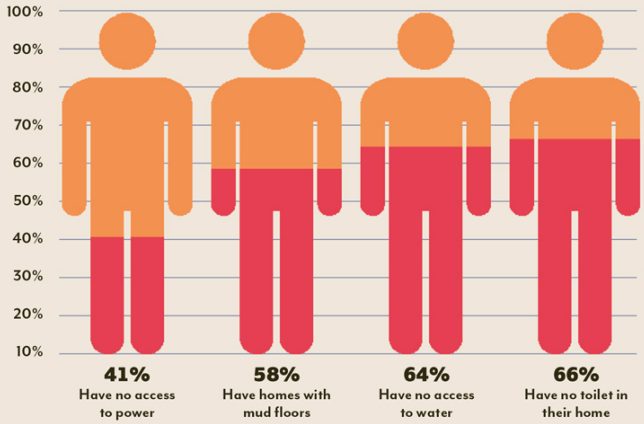
First black president of South Africa, 1918–2013
South Africa

Nelson Mandela spent almost 30 years in prison fighting against apartheid in South Africa. Apartheid was a government policy that separated people of different races. After being freed from prison, he became the first black president of South Africa.

"If needs be, it is an ideal for which I am prepared to die."

Indigenous rights

Indigenous people in the Americas, Australia, Africa, Asia, and Europe have long struggled for equal treatment in their ancestral homes and respect for their sacred places. The Australian Anangu people won a major victory in 2019, when the government agreed to allow them to keep tourists off Uluru, a sacred rock formation.



India's Scheduled Caste

India's Hindu caste system splits society into five groups. Members of the lowest-ranking group, the Scheduled Caste, are known widely as Dalits. Dalits have historically been treated as inferior and allowed to work in only the lowest level jobs. Although discrimination was made illegal in 1950, it continues. There are more than 200 million Dalits in India, and many have poor living standards.

Rights for LGBTQ+

LGBTQ+ people have been fighting for their rights since the 1970s. There has been some progress over the years, particularly in Western countries. Victories include the right to love, marry, and adopt children. Every year, in many cities, an event called "Pride" celebrates LGBTQ+ freedoms and demands the rights that the community is still fighting for.