



SCHOOL FILM SYNOPSIS

BLUE PLANET



A space film about Earth.

Billions of people have lived on Earth, but only a few hundred have seen it as it appears in space, suspended like a bright jewel in the vast black void. The rest of us have only experienced the view from space second hand, through words and photographs. In Blue Planet, we experience a view of our global home that is as close to being in orbit with the astronauts as one can possibly get.



In the first few moments of the film, a breathtaking earthrise fills the giant screen, shimmering blue and majestic in the blackness of space. Earth is the only planet in our solar system capable of sustaining life. Blue Planet explores the fragile balance of life on Earth and the forces that work on it: storms, volcanoes, earthquakes and, perhaps the most powerful force, humankind.



Trained to operate the large format IMAX® cameras, astronauts from five space shuttle missions brought back most of the footage, and brought back stunning images of the Earth in transition. Audiences will see a living atlas, as images that follow the curvature of the Earth reveal the landforms we recognise from our geography books.

The familiar shapes of India and Sri Lanka show the intertwining of the elements: Earth, water and air; the Big Island of Hawaii shows us what volcanoes can create; at the Straits of Gibraltar we see the meeting of two great continents, Europe and Africa, with the Mediterranean Sea between them.

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Running Time: 40 Minutes

In Africa, we travel high above the Great Rift and the broad Serengeti plain. When the strange red area that is Lake Natron in Tanzania appears, the scene shifts to the ground to investigate. The colour was no trick of the light. The waters are red, alive with the algae that feed on the white soda crusts from the volcanoes that line the Great Rift.

The same volcanoes spewed the ash that formed the soil of the Serengeti and home for the many species that live there, some in harmony, some in competition: zebras, giraffes, wildebeest, lions and humans. They thrive because the Earth provides the suitable conditions they need.

There are many forces at work on Earth, constantly interacting. The thunderclouds we see dotting the earthscape are part of the cycle that forms our environment. From space, we clearly see the areas that get the most rainfall. Costa Rica and Panama, for example, are green. The rainforest acts like a giant set of lungs, exhaling the oxygen we need back into the atmosphere.

IMAX School Bookings

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At the opposite extreme are the deserts. From space, we see the dramatic dunes of the Namib Desert in Southwest Africa. They sustain creatures that live on very little water, but not vegetation. Over Saudi Arabia, for example, we see a series of green circles, each a cultivated field half a mile in diameter, irrigated from wells drilled into water trapped in rocks beneath the sand. It will take 50 years to deplete the water supply and perhaps more than 10,000 to replace it.

Climatic changes we are just beginning to understand are also clear from space. Lake Chad in the Sahara desert has been shrinking since the astronauts began observing it 20 years ago. What does this mean for the rest of the planet? Another indication of how the world's climate has changed is in the glaciers that still remain close to both poles. Trapped inside the layers is a record of climate change going back 100,000 years when great glaciers covered northern Europe and much of North America. By analysing samples of the ancient ice, scientists hope to learn about our future from the history they reveal .

The part of the climate that we experience daily is weather, and our observation posts in space help track the great storms that occur all around the world. Tropical storms make beautiful patterns as they develop, but when we go down to ground level, we see how violent they are. Blue Planet looks at a hurricane from both sides: first we see the serene swirls in space; then we experience its power as it strikes, and the devastation it leaves behind.

There are other planetary forces; meteors have left evidence in the form of huge craters in Arizona and Quebec. But it is the forces within the Earth's crust that are the most dramatic. From orbit, we can see clearly that the Sinai Peninsula was separated from Saudi Arabia by plates moving apart. Mountains form where they push together, but we have to take another journey to see the rifts that are hidden ... those under the sea.

A camera was taken 3,000 metres under the surface of the ocean, where the tallest mountains begin. There are volcanoes here as well, and their lava warms the depths so that creatures we have never seen before can thrive. The tops of some volcanoes thrust out of the ocean as islands where we can see their smoke, even from space.

When plates collide, huge mountain ranges are thrust up. When they slide past each other, faults appear. In a computer simulated sequence, we fly north from Los Angeles to San Francisco along the infamous San Andreas fault, where stress from the sliding plates led to the San Francisco Earthquake of 1989.

There is a relatively new force on Earth, which has had a more powerful effect than even earthquakes, hurricanes or volcanoes. We humans are that force, and the IMAX camera shows us some of the damage our ever increasing population is inflicting.

We are fouling our rivers: evidence of silt run off and pollution can be seen clearly from space on major river systems including the Mississippi River in the United States, the Yangtze (Chang Jiang) River in China, and the Betsiboka in Madagascar.



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We are burning our forests, the lungs of the Earth. We fill the atmosphere with smog from our cars. At night, in space, we can see the lights of the cities, proof that our population has spread to every corner of the globe.

From the unique vantage point of space, we see a thin blue line stretched across the horizon. This is the atmosphere which contains the fragile ozone layer: our protection from the sun's harmful radiation.

Blue Planet is a space film ... about Earth. While we can marvel at the shimmering blue beauty of our planet as the astronauts see it, we are compelled to take a closer look. It is our only home.

NSW School Curriculum Links:

Stage 3:

* Science & Technology:

Earth & Its Surroundings (Out in Space, Environment Matters)

* HSE: Environments: Patterns of Place and Location; Relationships with Places (Global Environments; Global Connections)

Stage 4–5 Science:

* Outcome 4.9: Dynamic structure of Earth and its relationship to other parts of our solar system and the universe.

* Outcome 5.9: Development of the universe and the dynamic structure of Earth to models, theories and laws and the influence of time.

* Outcome 5.10: Human impacts on the interaction of biotic and abiotic features of the environment (ecosystems; resources).

Stage 4 Geography:

* Investigating the World (maps, physical & human features/ impact on globe); Global Environments (major geographic processes within environments; relationships between communities and environments on a global scale); Global Change (physical/ environmental changes caused by both nature and human development); Global Issues and The Role of Citizenship (climate change; threatened habitats; ocean resources; energy use; ecological sustainability)

Stage 6:

* Preliminary Geography: Biophysical Interactions (processes & issues eg. ozone depletion, deforestation, soil erosion, etc); Global Challenges (natural resource use)

* HSC Geography: Ecosystems at Risk; People & Economic Activity

Stage 6: HSC Senior Science: Space Science; Disasters

Stage 6:

* Preliminary Earth & Environmental Science: Dynamic Earth

* HSC Earth & Environmental Science: Caring for the Country; Tectonic Impacts