



# INDIAN SCHOOL AL WADI AL KABIR

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<b>Question Bank</b>	<b>Topic: JOURNEY TO THE END OF THE EARTH</b>	<b>Note: TEXTBOOK – VISTAS</b>

## JOURNEY TO THE END OF THE EARTH

(By- Tishani Doshi)

### Introduction

In 'Journey to the End of the Earth' Tishani Doshi describes the journey to the coldest, driest and windiest continent in the world: Antarctica. The world's geological history is trapped in Antarctica. Geoff Green's 'Students on Ice' programme aims at taking high school students to the ends of the world. Doshi thinks that Antarctica is the place to go and understand the earth's present, past and future.

### Summary of the lesson

Beginning of Journey- The narrator boarded a Russian research ship-The 'Akademik Shokalskiy'. It was heading towards the coldest, driest and the windiest continent in the world, Antarctica. His journey began 13.09 degrees north of the Equator in Madras (Chennai). He crossed nine time zones, six checkpoints, three bodies of water and at least three ecospheres. He travelled over 100 hours in car, aeroplane and ship to reach there. Southern Supercontinent (Gondwana)- Six hundred and fifty million years ago a giant southern supercontinent Gondwana did indeed exist. It is centered roughly around present-day Antarctica. Human beings had not arrived on the global scene. The climate at that time was much warmer. It supported a huge variety of flora and fauna. When the dinosaurs became totally extinct and the age of mammals began, the landmass was forced to separate into countries as they exist today. Study of Antarctica-The purpose of the visit was to know more about Antarctica. It is to understand the significance of Cordilleran folds and pre-Cambrian granite shields; ozone and carbon; evolution and extinction. Ninety per cent of the earth's total ice volumes are stored in Antarctica. Icebergs are as big as countries. Days go on and on in 24-hour austral summer light. Human Impact- The most hotly contested debate of our time is whether West Antarctica Ice sheet will melt entirely or no. If we want to study the earth's past, present and future, Antarctica is the place (for us) to go. Antarctica has a simple eco-system and lacks biodiversity. It is the perfect place to study how little changes in the environment can have big repercussions (results). Scientists warn that a further depletion of the ozone layer will affect the lives of the sea-animals and birds of the region. It will also affect the global carbon cycle. The burning of fossil fuels has polluted the atmosphere. It has created a blanket of carbon dioxide around the world. It is increasing the global temperature which is visible in Antarctica when we see ice bergs melting away. It shows how minor changes in the atmosphere can cause huge effect. If the global temperature keeps on increasing the human race may be in peril. "Students on ice" is a programme which provides the students an ample opportunity to understand how global temperature can be a big threat to human existence. It inculcates a new understanding in them. Geoff Green thinks that high school students are the future policy makers. They can help in saving the earth from ecological dangers and the effects of global warming. Effect of Climatic Change- The author gives us an example

to show how small changes in the atmosphere can be threatening. The microscopic phytoplanktons are single celled plants. They nourish

The entire Southern Ocean's food chain. They use the sun's energy to assimilate carbon and supply oxygen. Any further depletion in the ozone layer may affect this functioning and indirectly affect the lives of all marine animals. Walk on the Ocean -It was the most thrilling experience of the visit. They climbed down the gangplank and walked on the ocean. They were 52 persons. They were walking on a meter-thick icepack. Under the ice pack there was 180 meters of living, breathing, salt water. Seals were enjoying themselves in the sun on ice. The narrator was wondering about the beauty of the place. He wished it would not become a warm place as it used to be millions of years ago. If it happens, the results can be ruinous.

**Gondwana:** About 650 million years ago, Gondwana was a supercontinent. It was warm and many species of flora and fauna prospered there. But there were no humans then. But around the time when dinosaurs were wiped out, Gondwana began to break up. India pushed against Asia and buckled its crust to form the Himalayas. South America drifted to join North America, opening up the Drake Passage. It created a cold current that went around the South Pole. It left Antarctica cold and isolated.

**Importance of Antarctica:** The Antarctica is now a part of that history. It helps us to understand where we came from and where we are going. It helps us to understand the significance of Cordilleran folds and Precambrian and extinction. Antarctica has remained unspoiled by humans. Its ice-cores hold half-a-million-year-old carbon record. It helps us to examine Earth's past, present, and future.

Antarctica is a huge expanse of ice. It is all barren. There are no human markers. There are no trees, buildings or billboards. There are huge icebergs. There are blue whales. But there are very tiny things too. There are no mornings, noon, evening and nights- 24-hour austral summer light. There is silence everywhere. So, you lose all earthly sense of time and space.

Human civilization is only 12,000 years old. It is only a few seconds old on the geological clock. But during this short period, man has caused much confusion. He has built towns and cities. He has wiped out many other species to grab limited natural resources. By burning fossil, man has created a blanket of carbon dioxide around the world. This is raising the global Temperature.

This rise in temperature has caused climate changes. It is the most hotly debated question. Many scientists foretell disaster.

Antarctica is the place to see the impact of these changes. Because it has a simple ecosystem, a little change in the environment can trigger a big effect. Take, for an example the microscopic phytoplankton. They are single-celled plants. Through photosynthesis, they assimilate carbon to form organic compounds. They sustain the entire food chain in the southern oceans. They regulate the global carbon cycle. Any further depletion of an ozone layer will cripple phytoplankton. If they did not function, the entire food chain and global carbon cycle would collapse.

Students on Ice is a programme headed by Canadian Geoff Green. He has chosen to take students to the end of the world, the Antarctica. He wants to provide young students with an opportunity to understand and respect the planet. Students are young. They are ready to absorb, learn and act. They can actually see the effect of global warming. They see glaciers retreating and ice shelves collapsing. They cannot remain unaffected. They can see the threat is real. They are the future policy makers. They have idealism. They will act.

**Human Impact on the Environment-** Human beings have been on the earth for about 12,000 years. In this short span of time we have changed the face of our environment for worse. We have dominated the Earth by establishing cities and megacities. This has led to encroachment on Mother Nature. We are limiting the natural resources on the planet for other creatures. Burgeoning population has added to our woes. The average global temperature is rising and the blanket of carbon dioxide around the world is increasing due to the unmitigated burning of fossil fuels.

**The Paradox of Climate Change-** There are many unanswered questions about climate change and the narrator is disturbed by them. Will the west Antarctic ice sheet melt completely? Will the Gulf Stream

current be disrupted? Will the world come to an end?

In this debate, Antarctica has a major role to play. This is because as compared to other places it remains relatively pristine and contains half-million old carbon records trapped in its layers of ice. The know about the earth's past, present and future- one has to go to Antarctica.

**Lessons to be learnt** – The greater lesson to be learnt is little changes in the environment can have big repercussions. The microscopic phytoplankton nourish marine animals and birds in the region. Any more depletion in the ozone layer will affect the activities of these grasses. This in turn will affect the lives of others in this region and the global carbon cycle. The phytoplanktons lead us to conclude that if we take care of the small things, the big things can be saved.

### **Important Questions and Answers**

Q1. What is Antarctica?

Q2. What is 'Students on Ice?' (Imp)

Q3. Why did Geoff Green decide to take high school students to Antarctica?

Q4. Why is Students on Ice Program a success?

Q5. Why the youngsters are called the future policy makers of the earth?

Q6. What lessons are we able to learn from Antarctica?

Q7. What are phytoplanktons? How are they important for the earth's survival? What does

the parable of phytoplankton teaches us? (Imp)

Q8. How is Antarctica significant in climatic debates?

Q9. How do geological phenomena help us to know about the history of humankind?

Q10. What are the indications for the future of humankind?

Q11. 'The world's geological history is trapped in Antarctica: How is the study of this

region useful to us? (Imp)

Q12. Why is Antarctica the place to go to, to understand the earth's present, past and future? (Imp)

Q13. "Take care of the small things and the big things will take care of themselves." What is the relevance of this statement?

Q14. What impact has human civilization had on our environment?