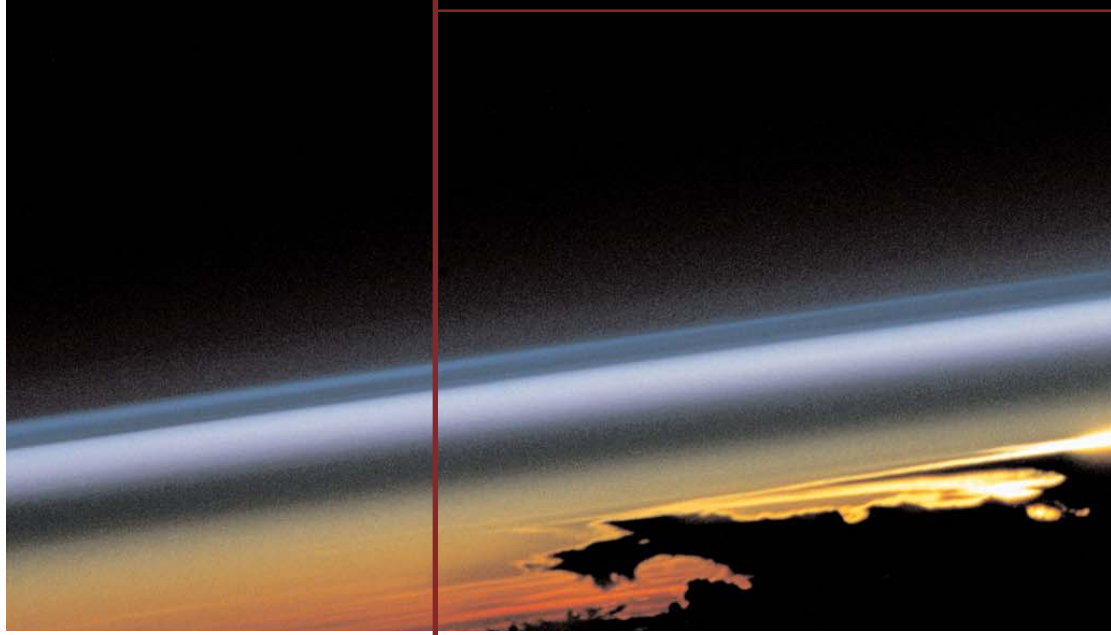




Atmosphere

CHANGE IS IN THE AIR



Smithsonian
National Museum of Natural History

INTRODUCTION

[What's colorless, tasteless, and \(mostly\) odorless?](#) Surrounds and protects us throughout our lives? Makes Earth habitable? Is so fragile that it needs our care and protection? **OUR ATMOSPHERE!** Earth's atmosphere is vital to our planet—but most people know very little about it. It is where shooting stars blaze, where the ozone layer protects all life and where weather forms.

[Earth's atmosphere has been changing since Earth began.](#) Once living things evolved the ability to carry out photosynthesis, perhaps 2.7 billion years ago, they began to remake the atmosphere. Ever since then, life and Earth's atmosphere have waltzed together. As far as we know, the relationship is unique to our planet. The Smithsonian Institution's National Museum of Natural History developed the exhibit *Change is in the Air* to explore the deep history, chemistry, and importance of earth's atmosphere in an engaging new way!

[These eight educational activities extend the themes and content of the exhibit to middle school students, teachers, and families.](#) The lesson plans are designed to be interdisciplinary, interactive, and fun. It is our hope that they inspire you, your families, and your students to use scientific inquiry to learn more about the forces that shape our dynamic planet.

National Science Education Standards

Content Standards for Grades 5–8
National Academy of Sciences, 1996

	How do we know	Atmosphere reacts	Atmosphere Transports	Atmosphere Protects	Frisbees	Greenhouse in a Jar	Ancient Atmospheres	What is the Atmosphere?
Scientific Inquiry Abilities necessary to do scientific inquiry Understandings about scientific inquiry	● ●	● ●	●	●	●	●	●	●
Physical Science Properties and changes of properties in matter Motions and forces Transfer of energy		●	●	● ●	●	●		
Life Science Structure and Function in Living Systems Regulation and behavior	●			● ●				
Earth and Space Science Structure of the earth system Earth's history	●		●	●	●	●	●	●
Science and Technology Abilities of technological design Understandings about science and technology	● ●	●	●	●	● ●	● ●	● ●	● ●
Science in Personal and Social Perspectives Personal Health Natural hazards Risks and benefits Science and technology in society	●	● ●	●	● ● ●	● ● ●	●		●
History and Nature of Science Science as a human endeavor Nature of science History of science	● ● ●	● ●	●	●	●	●	● ● ●	●