Clouds

Introduction

Credit: Bob Williams, Courtesy National Oceanic and
Atmospheric Administration

From the previous investigations into weather, your students should have developed a concept of air as something that moves, fills space, exerts pressure and can push on things. They should know that it has properties, like temperature and wind speed, that can be measured. In the following investigations, your students will consolidate their understanding of these properties of air while adding clouds and precipitation to the picture.

Earth's atmosphere, so critical to its living systems, is a mixture of gases. The major components are nitrogen and oxygen. Minor components include argon, carbon dioxide, and numerous trace gases. But this list of gases leaves out one critical component of the atmosphere-water.

Besides being vital to life on Earth, water's properties make it the most noticeable of the mix of gases in the air. Why? Because it is the only substance naturallyoccurring in the atmosphere that, under ordinary life-supporting conditions, is found in all three states of matter-solid, liquid, and gas.

Children quickly become aware of the two states of water, liquid and solid, but they may have little idea of water vapor as an invisible gas.

Weather Unit Sections