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A Science Service Feature

? WHY THE WEATHER ?

By Dr. Charles F. Brooks
of Clark University

INSIDE TEMPERATURE AND OUTSIDE WEATHER

Indoor comfort depends not only upon outside temperature, but upon the wind and sun as well. To keep a frame house warm, you may require as much fire on a very windy day when the temperature is say 30 degrees Fahrenheit as on a calm day with the thermometer at 15 degrees Fahrenheit. In exposed locations, the wind may balance an even greater temperature difference. In windy weather, we lose heat from the precious coal especially by air leakage through cracks and openings. Cold air pushes in and warm air goes out. Wind suction on the lee side is as important as pressure on the windward side. Substantial construction, storm windows or weather strips on all sides of the house help keep out the wind. In very cold weather, much heat is lost also by conduction through the walls and windows in addition to air leakage. See what happens with single windows -- the inside of the glass is often cooled to a temperature below freezing, becomes covered with frostwork and serves as a large refrigerating surface for the room. Double windows will considerably reduce the loss of heat, the inner pane rarely becomes cold enough to be frosty, as the air between the two panes is a good non-conductor. Yet the double window does not exclude the sunlight and effective source of free heat. A cloudy day at 30 degrees often seems no warmer than a sunny one at 20 degrees. It is lucky for us that the lowest temperatures are likely to occur in calm clear weather, rather than on cloudy windy days.

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