

# **Strategies for Teaching Severe Weather in the Classroom – An Active Learning Approach**

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After the extreme weather of the previous winter, the spring of 2011 followed with record severe weather outbreaks across the lower Great Plains and the southeastern U. S. especially during the month of April. A persistent upper level trough over the nation's mid-section, coupled with an active polar jet stream, was largely responsible for this unusual pattern. This workshop will explore exciting methods to teach the physical concepts that underlie severe weather through an active learning model that emphasizes hands-on activities and making connections to real world phenomena. The core of the presentation will consist of examining both real time and historic data (including from the Spring of 2011) as well as activities such as "tornado in a bottle" and experiments in fluid dynamics using a dishpan and water.

## **PRESENTER'S BIO**

Jonathan Byrne, a former forecaster, is currently a writer, artist and science educator. Jonathan was also a contributing author to the AMS monograph Life Cycles of Extratropical Cyclones, and has presented at numerous meteorology conferences including the Northeast Storm Conference. Jonathan holds a B. S. in physics and atmospheric science from Boston University where he completed a successful internship at WBZ TV, Boston with Chief Meteorologist Bruce Schwoegler, and an M. S. in secondary science education under the mentorship of Professor Arthur Eisenkraft, founder of Active Physics and Chemistry.