

① OBSERV./
RECORDING

Predicting Weather Is a Trip to Uncertainty

To make predictions, scientists take weather observations from many sources, including aircraft and satellites, and feed the data into computer programs that simulate how the atmosphere works. The computer then takes the observations and estimates what will happen as sunlight, wind, oceans and clouds interact.

② Data attached to a "process" program

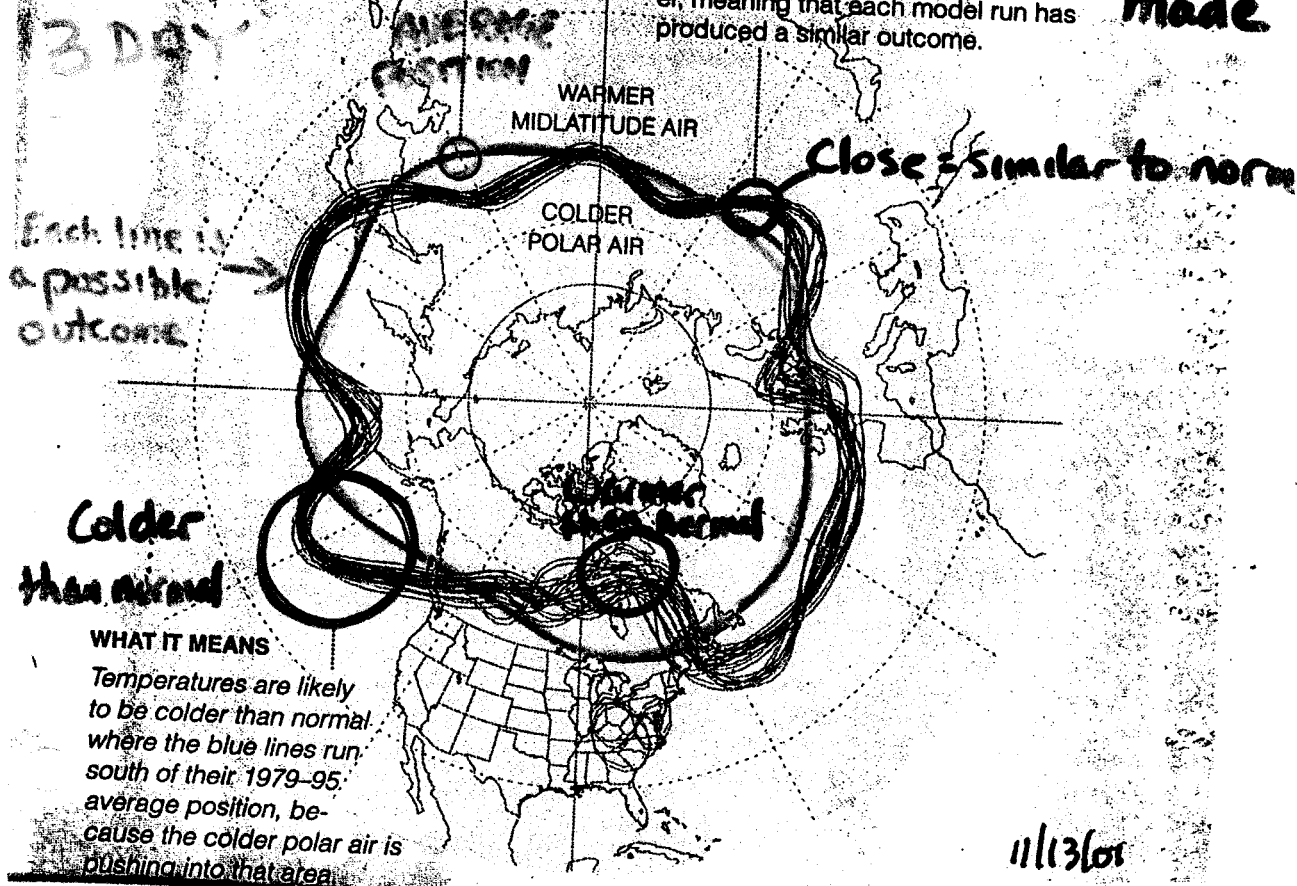
③ Outcome is compared to stored models

④ Prediction made

THE 3-DAY FORECAST The lines on the maps mark the boundary between colder polar air and warmer midlatitude air. On the top map, the computer model takes the weather observations and plots the boundary after 72 hours of weather simulation.

- The yellow line is the 1979-95 average location of the separation between colder and warmer air.

- Each blue line is a possible location of the same boundary based on the computer model's 3-day forecast. The blue lines are close to one another, meaning that each model run has produced a similar outcome.



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