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A case study of weather forecast methodology defined by students

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One of the main priority for our future society is to increase the interest of young people in science and technology. The cooperation between researchers, who produce scientific knowledge, and teachers, who disseminate it among students, is an effective method to reach this goal. In fact Science dissemination at school, overseen by researchers, can be of mutual benefit because scientists can improve their communication skills and convey their enthusiasm for scientific research. The Institute of Biometeorology has been working on science dissemination for many years in many different topics like meteorology, carbon dioxide fluxes and greenhouse effect and phenology, relying mainly on practical experiences made by the students under the supervision of researchers. This presentation reports of some experimental activities on Meteorology done in Liceo Scientifico of Prato Italy. The aim of the activity was to define a methodology of weather forecasting based on clouds observation. At first the researchers present and discuss with the students the meaning and graphic representation of some meteorological parameters and the methodology to identify clouds type and characteristic. An automatic weather station was set up on the roof of the school and students practiced how to download data from the weather station. At the same time they carried on daily observation of presence and types of clouds in the sky. Then they analyzed meteorological data and particularly atmospheric pressure and air humidity and defined their own methodology to do forecast. Finally they validated their results by comparing them with the meteorological maps of the regional weather service.