

Using Forecasting to Teach Weather Science

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Weather affects our lives and hence, is a popular topic in daily conversations and in the media. Therefore, it is not only important to teach weather, but is also a good idea to use 'weather' as a topic in science teaching.

Science education has two main objectives: to acquire scientific concepts and methods. Weather forecasting is an adequate theme to teach scientific methods because it is dependent on observation. However, it is not easy to forecast weather using only temporal observation. We need to know the tendency of 'weather change' via consecutive and/or continuous weather observation. Students will acquire scientific-observation skills through weather observation.

Data-processing skills would be enhanced through a weather-forecasting contest. A contest should be announced within 5 days of school events, such as a school excursion and field day. Students submit their own weather forecast by gathering weather information through the internet, news paper and so on. A weather-forecasting contest compels the student to observe the weather more often.

We currently have some different weather forecasts. For example, American weather-related companies such as ACCU weather and Weather Channel provide weather forecast for the many locations all over the world. Comparing these weather forecasting with actual weather, participants such as students could evaluate the differences between forecasted and actual temperatures. Participants will judge the best weather forecast based on the magnitude of the difference. Also, participants evaluate the 'hitting ratio' of each weather forecast. Students can learn elementary statistics by comparing various weather forecasts.

We have developed our weather web-site that provides our own weather forecasting and observation. Students acquire science skills using our weather web-site. We will report our lesson plans and explain our weather web-site.