



## Weather: Class Project

**Grade Level:** 4<sup>th</sup> grade

**Where Taught:** in a classroom or lab

**# Students:** up to 30 students, with teacher or another responsible adult

**Time needed for presentation:** 55-90 minutes

**Targeted Georgia Performance Standards (GPS):** 4<sup>th</sup> grade S4E3 a, c, d, e and S4E4 a, b, c, d.

The Weather module is designed as an assisted classroom project conducted by students and teacher over a span of two weeks. Students will be introduced to the factors that influence weather, the methods used by meteorologists to predict the weather, and the impact of severe weather on the environment. Students will learn about:

- the types of clouds used to predict weather
- weather patterns associated with passing warm and cold fronts
- how thunderstorms, tornadoes and hurricanes are formed

Students will have an opportunity to discuss the effects that these weather phenomena have on climate as well as our lives.

Accurately recording and interpreting data is the basis for any type of scientific experiment. Students will strengthen their data collecting skills by measuring and recording the daily weather conditions at their school using instruments provided by our program. Under the instruction of a Bio-Bus fellow, students will learn to collect the following:

- temperature (in Celsius and Fahrenheit)
- relative humidity
- precipitation
- wind speed

This module will take three weeks to four weeks to complete. On the first day, a Bio-Bus fellow will bring the weather station to the school, install it, and give a brief ten to fifteen minute presentation on how to use the equipment. Teachers will be given a disk with an Excel spreadsheet for them to record the weather data; a hard copy of this spreadsheet will be distributed to the students so they can keep their own records of the weather reports. After two weeks of collecting data the teacher will email the spreadsheet to the Bio-Bus staff, at least three days before the scheduled Bio-Bus visit. The spreadsheet will be converted into graphs that will be integrated and discussed with the students during the presentation. The Bio-Bus fellows will return to the school three to four weeks after the first visit to present the Weather module to the students.

The Bio-Bus will provide all materials used during the Weather module. Each student will need a pair of scissors and a clipboard on the set-up day; please let us know if we need to supply those. Teachers are required to have a computer with Microsoft Excel, internet access and a printer. This module will require a good bit of planning and coordinating between teachers and the Bio-Bus staff, but students will benefit by being able to walk away from this module with better understanding of meteorology and how it influences our daily activities.