Lesson 15: Getting the Facts – Entering Data

Overview: Provide students with accounts and passwords. They collect data and enter it online in groups or as a class. In Phase III, they will use this data.

Materials:

- a thermometer
- anemometer (*optional*)

Making Observations:

1. For at least two weeks, take weather observations at the same time everyday. Weekends can be included to provide a more complete record.

Teacher Tip: In order to analyze the data, it is important that students take the temperature at approximately the same time each day.

There are some excellent math lessons in Phase II. While working on these lessons, weather data is collected daily by students and will be later used for an important activity in Phase III.

Data is collected and entered by student teams logged into the website. The information students gather may come from the WDLC website, or, hand-held weather instruments can be used! To purchase hand-held instruments, check the WDLC website Teacher Resources for inexpensive products.

Hand-held instruments are a great alternative to internet data. Getting outside and using one's senses gives a real appreciation for the weather information is highly recommended!

2. On a daily basis, enter the data on the WDLC website by logging in as a Student Team or Class. For days when a computer is not available, use the chart provided to keep track of the data you collect and enter the data on the WDLC website, when possible.

3. At the beginning of Phase III, the data will be printed out. It will then be analyzed. Lessons learned from collecting data will help with other projects in Phase III.

The data to be gathered daily are:

Temperature. The **THERMOMETER** is used for **TEMPERATURE** data. *Leave it outside for at least 10 minutes for accuracy.* Temperatures are recorded in [º Fahrenheit].

Cloud Cover. The sky is observed with one's **EYES** to calculate **CLOUD COVER**. Simply look out the window, or, better yet, go outside and take a look around!

Possibilities for observations include:

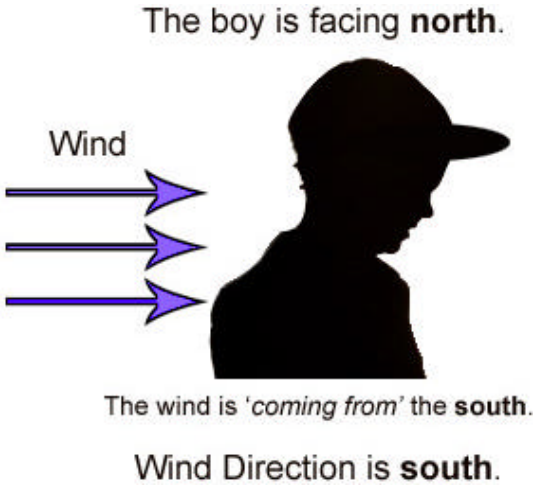
- There are no clouds, or 0/4 = *Sunny*
- The sky is 1/4 cloudy
- The sky is 1/2 cloudy
- The sky is 3/4 cloudy
- The sky is 4/4 cloudy = *Overcast*

Wind Direction. The **WIND DIRECTION** is the direction from which wind is coming. Use a compass while taking time to see <u>from what direction</u> the wind blows on your back. A light cloth can be held up to see from where the movement comes.

Another option is to purchase a hand-held **ANEMOMETER** which can be held up in an open space. Good readings are taken by <u>standing far from a building</u> and holding up the instrument!

Teacher Tip: It can be useful to line up the compass with the anemometer and perhaps mark "N" for North on the pavement or area where students do the observations everyday.

Teacher Tip: Remember, the wind direction is: "*the direction where wind is coming <u>from</u>*" A north wind is a wind that comes from the North. A north wind can be very cold!



Rain/Snow. Students document whether it is raining or snowing.

Date	**Temperature** (in ºF)	**Cloud Cover** (0/4, 1/4, 2/4, 3/4, or 4/4)	**Wind Direction** (north, northwest, northeast, east, southeast, south, southwest, or west)	**Is it raining or snowing?** (yes or no)