Lesson Plans: Observing Wind Speed and Cloudiness

Objective

The objective is to demonstrate students' skills in observing the atmosphere, specifically in terms of wind speed and cloudiness.

Materials

Each student or group of students will need the following:

- Large wall chart showing the Beaufort Scale
- Large wall chart showing the three cloud levels and four common types of cloud
- Students' individual copies of the above would also be useful blank data recording sheets for wind speed and cloudiness

Important Points to Understand

This is a practical activity that encourages the students to improve their powers of observation. They are simply asked to observe the wind speed, using the Beaufort scale, and to observe the cloud cover, shape, and height. No instruments are required, and the activity can be carried out anywhere in the school compound or at the students' homes.

Cloud cover is usually given in a unit known as okta. One okta means one-eighth of the sky. If the sky is completely covered in cloud, the cloud cover is given as 8 oktas, or 8/8. If the sky is half covered, the cloud cover is 4 oktas, or 4/8. Clouds can be low [0-3 kilometers high], medium [3-6 kilometers high] or high [over 6 kilometers high]. Very high clouds, which are made of ice crystals, are known as cirrus clouds. Flat clouds are known as stratus. Clouds that have a rounded, fluffy shape (very common in the Pacific), are called cumulus. Low black or gray clouds that bring rain are known as nimbus.

Preparation

It is important to get a cloud chart from the local meteorological service if not easily available in the school. Subsequent explanation on cloud identification by the teacher is also necessary. Although, this activity is largely based upon estimation, students who take part in it should be aware of the fundamental understanding of winds and clouds.

Procedure

After the teacher's brief introduction, the class should leave the classroom and go out into the open air. Where possible, observations should be made at a site where the view is relatively uninterrupted, so that they can see as much sky as possible. For recording wind speed, the students should be encouraged to look at objects that are high up, rather than those that are at ground level. Each student can record wind speed and cloud cover, and results can be compared with other class members. Each student can write down the observations made by him/her and 5 other students. Before the lesson closes, the students should be asked to take further observations by themselves during

the day, at specific times, and record the results.

Student Record (for comparing with 5 other students)

Name	Date	Time	Wind Speed (Beaufort #)	Cloud Cover	Cloud Height	Cloud Shape
					· ·	
Individ	ual Stud	ent Re	ecord (for ob	servations ou	itside the clas	sroom)
Name	Date		ecord (for ob Wind Speed (Beaufort #)	servations ou Cloud Cover	Itside the clas Cloud Height	sroom) Cloud Shape
			Wind Speed			-