

Chapter 1

Geography outdoor lesson - Weather Instruments

Melinda Boda

Liceul Tehnologic Octavian Goga Jibou, Romania

Summary

The Weather Instruments lesson provides students the opportunity to examine types of weather instruments used to collect data from the atmosphere.

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Introduction

Students discover how scientific instruments are used to forecast weather by examining weather instrument models and they collect weather data from the atmosphere.

Learning objectives

-to develop a deeper understanding of how people collect data from the atmosphere to forecast weather

-to be able use common instruments used to gather weather data

-to be able to decipher basic weather maps

Resources

Weather station (compass, anemometer, thermometer, wind vane, barometer, hygrometer)

Cloud map, photos with types of clouds

Activity

Step 1: Whole class discussion about the place of the lesson (Dragon Garden), how the rocks were formed, the influence of the climate and weather on their formation.

Step 2: The teacher hands out photos showing different amount of cloud cover, then she explains the students that sky conditions are estimated in terms of how many eighths of the sky are covered in cloud, ranging from 0 oktas (completely clear sky) through to 8 oktas (completely overcast). Students are asked to analyze the clouds and determine the amount of cloud cover in that moment.

Step 3: The teacher hands out photos showing different types of clouds. Students are asked to analyze them and determine what type of cloud is there at that moment.

Step 4: The teacher shows students the weather station and elicits answers for each instrument whether they know what they measure. The teacher explains in detail each instrument and do the measurements together.

Step 5: As a conclusion, students work in groups of 4-5 to complete together the worksheet handed out by their teacher. They need to fill in the weather conditions for that moment: amount of cloud cover, type of cloud,

degrees, speed of wind, direction of wind, atmospheric pressure, humidity. They compare their answers with other groups and then teacher checks with the whole class.

Comments from the learners' surveys

Students were very pleased by this activity. They liked that they didn't have to learn about the weather instruments in the classroom and they could do the measurements by themselves.

Final remarks

The Geography outdoor lesson provided opportunities for students to gain knowledge and obtain skills in a natural environment. It was an opportunity to make learning concepts, real and relevant by putting them into a more realistic context. It would have been difficult to get a grasp in the classroom of all the weather instruments, to make all the observations, measurements and analysis. Students were more engaged and motivated to understand and learn in a real environment and context.

Supplementary material

1. https://www.facebook.com/pg/outdoorlearningerasmus/photos/?tab=album&album_id=350654148753853
2. <https://outdoorlearningweb.wordpress.com/outdoor-lessons/>
3. <https://twinspace.etwinning.net/45380/pages/page/37943>