Meteorologist (Scout Tech)

1. Keep a daily record of the weather from your own observations for at least one month, to include at least four of the following:
   a) Wind speed and direction
   b) Cloud type and amount
   c) Temperature
   d) Pressure
   e) Rainfall amount.

2. Understand the working principles of the following instruments and construct a simple version of two of them:
   a) Thermometer
   b) Barometer
   c) Anemometer
   d) Rain gauge.

3. Understand at least three different ways in which clouds are formed.

4. Answer the following questions.
   a) How does climate affect human life and activities?
   b) How does human life and activities affect Climate?
   c) What is the problem?
   d) What can we do about it

Requirement 1:

Your table should look something like the table below. Try to be consistent and make your observations the same hour every day.

Date	Wind speed and direction	Cloud type and amount	Temperature (^{0}C)	Rainfall (mm)
1/11/20	*Light Easterly*	*None*	*20*	*0*

Wind speed is measured in knots, but since you don't have a sophisticated anemometer that will give you that, you can use the following terms: Calm (No wind, smoke rises straight up), Light (Wind is felt gently. Leaves rustle), Moderate (Small branches move. Paper blows on the street), Strong (Large branches move) and Gale (Difficult to walk). These are the general terms used by meteorologists to describe in simple terms wind speed. There are other in between terms but we will keep it simple.

Wind direction is measured relative to North and is reported from where the wind is blowing. For Example, an easterly wind blows from East to West.

Cloud types

The above photo shows the main types or categories of clouds. Find out the sub types, categories and try to familiarize yourself with them. We will be asking questions like what height you usually find them and we might show you pictures and ask you to name them.

Temperature is measured in degrees Celsius (^{0}C). If you don't have a thermometer at home, use the temperatures reported at the weather forecast on the news. Just make sure it is the same time every day.

Rainfall is measured in millimeters (mm) or centimeters (cm). You are going to have to make your own rainfall gauge and measure it on a daily base.

Requirement 2:
This is probably the most interesting task you have to do for this badge and is going to help you with req. 1. You need to research each instrument and find out what it measures and how it measures it. Write a small paragraph for each one. Please do not copy and paste! Write it in your own words, whatever you understand.
Then build at least two of the instruments. There are a lot of websites and YouTube channels that will show you how to build your instruments. Make sure you take pictures whilst you are building them and using them! Send them in! they are the evidence that you did the work!

Requirement 3:
This is partly covered under req. 1, If you done your research correctly, you probably have the answers, if not, go back. Write down your findings in your own words.

Requirement 4:
This is really to get you thinking. There is a problem and we hear about it and feel it every day. You can answer the four questions individually or as one. Up to you. Do your research and take notes, then put your thoughts on paper and send them in. Some notes to consider:

- When you take a picture make sure your camera lens is clean
- Have a look at your photo. If it's out of focus or blurred, take another one
- Hand written documents are acceptable but, make sure we can read them. Write clearly.
- When you take the photo of your document, look at the photo and try to read it. If you can't read it how are we going to manage.
- Don't start sending photos or requirements in when you finish them. We will tell you at the end of the badge how to send everything in.
- We will be checking your progress periodically

Thank you and good luck!

You can contact me by email: avmoraris1@cytanet.com.cy or phone 99656831