**Earth Science 11 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Extended Weather Lab Block: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Weather is a part of our everyday lives. It shapes our landscape, affects our decisions and activities on a day to day basis, and more. In this lab you will discover the weather in your local community, collect data, and forecast the future!

**Your Role:** You are a scientist on a team of weather trackers and forecasters.

**Your Task:** In groups, you will conduct a long-term weather lab. Each group will have an “expert” in one weather instrument (thermometer, barometer, wind vane, and rain gauge) who will construct and monitor their instrument, sharing the results with their groups each day.

**Outline:**

* Step 1: Construct a weather instrument (procedure and materials provided). Track weather daily at home (5-10min max), and share their data with each other each day in class ***(Planning and Conducting****)*
* Step 2: Graph your data and identify patterns that show what is coming next ***(Processing and analyzing data and information)***
* Step 3: Use your data to predict 2-3 days of weather providing scientific reasoning for your predictions ***(Processing and analyzing data and information)***
* Step 4: Track the last 3 days of weather to determine if your predictions were correct and outline why/why not ***(Evaluating)***

**Product:** You will be evaluated on a rubric for each step of the project. You are contributing your data to your group however you are responsible for submitting individuallab reports.

Part One: *Planning and Conducting*

In your groups you must decide who will be responsible for each weather instrument. Consider each group members’ strengths and decide as a group who will be responsible for each instrument. (This must be signed off on by Ms. Abbott before proceeding.)

|  |  |
| --- | --- |
| **Thermometer**  |  |
| **Barometer** |  |
| **Wind Vane** |  |
| **Rain Gauge** (including cloud observations) |  |

 Ms. Abbott initials: \_\_\_\_\_\_\_\_

Your role – You will first become an “expert” in the weather instrument that you are responsible for. You are going to meet with the other experts to build, research, and test your instruments.

You are responsible for tracking the measurements of your instrument daily. This should take no more than 5-10 minutes at home each day after school/evening.

You will be given time each day in class to exchange data with your group-mates, and record it in your Earth Science notebooks (left in class).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **0** | **1** | **2** | **3** |
| **Collaboratively and individually collect reliable data (qualitative and quantitative)** | Student did not contribute data to their team. | Student contributed *some* data to the team. | Student contributed data to the team. | Student contributed *reliable* and *accurate* data to the team. |
| **Use appropriate units to systematically and accurately collect and record data** | Student has not collected data.  | Incomplete and/or disorganised data collection methods. | Data collection was *complete* and *organised* in a table. Table contained headings | Data collection was *complete*, *accurate*, and *organised* in a table. Table contained appropriate headings |