CLIMATE CHANGE IN ATLANTIC CANADA

The Whitney Journals
DATA COLLECTION PROJECT

BACKGROUND

The Whitneys are a couple in southern New Brunswick who have been collecting citizen-sourced climate data for nearly 40 years. They have looked at everything from the daily temperature to the arrival of songbirds in their area. This data has become incredibly valuable because it allows researchers to analyze and look for trends in this information, which allows them to draw conclusions about changes in the local climate.

Below are some of the indicators that the Whitneys observed.

CURRICULAR CONNECTIONS:
Science 10 Weather (331-5) and Environmental Science 12 Unit 3 (Investigating Environmental Issues)

Item	Objective vs. Subjective	Method
TEMPERATURE	**Objective**	**Thermometer Twice Daily**
ARRIVAL OF SPRING PEEPERS	**Subjective**	**Auditory - Seasonal**
BAROMETRIC PRESSURE	**Objective**	**Visual assessment of tree movement Twice Daily**
WIND SPEEDS	**Subjective**	**Barometer – Twice Daily**
SONGBIRDS	**Subjective**	**Visual/Auditory -Seasonal**
LILAC LEAFING & BLOOMING	**Subjective**	**Visual - Seasonal**

PROJECT

In groups, come up with a list of 5-10 phenomena that you could easily collect data on. Be sure to use a mix of objective and subjective items. Feel free to use a combination of the indicators used by the Whitneys and ones that apply to your community! Once you and your group have brainstormed the phenomena you wish to collect data on, each one of you will collect data on it over the next 2 weeks.

DELIVERABLES

1. A list of 5+ phenomena that you intend to observe over this project

2. A simple and easy procedure on how you intend to collect data on those phenomena

3. Two weeks of journal entries of the data you collected

4. Answers to the reflections questions

DATA COLLECTION REFLECTION QUESTIONS

1. What were some challenges you faced while collecting your data? If you didn't experience any challenges, think about some challenges you could have faced if you were doing this at a different time of year.

2. What would you change about your data collection (i.e. procedure or phenomena).
   If you wouldn't change anything, what else could you have done to add value to your data?

3. Do you believe that your data is precise and accurate? Why or why not?

4. How might citizen source data be different from scientifically-collected data?
   What is the value of citizen-sourced data?

5. Were your observations similar to those of your peers?
   What were some similarities and what were some differences?

CONCEPT QUESTIONS

1. Who are the Whitneys and what sorts of observations did they make?
Why did they make these observations?

2. Could these journals be applicable to New Brunswick as a whole? The Maritimes? Eastern Canada?
All of Canada? What do you think their limits are and why?

3. What were some indicators that they used to assess abiotic (e.g. wind) factors within their area?

4. What is a bio-indicator? What is one that could be used for your community?

5. Could a bio-indicator for one region be used anywhere? Explain why or why not.

6. How does Atlantic Canada benefit from climate change? How might your community?

7. How is Atlantic Canada adversely affected by climate change?
How might your community be adversely affected?

8. What is citizen-sourced data and why might it be considered "less-scientific" by some?

9. We learned in the video that poplar and maple trees have responded differently to climate change.
Why might this be?

FOR MORE INFORMATION VISIT:

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United Nations
Organization for Education,
Science and Culture

Organisation des Nations
Unies pour l'éducation, la
science et la culture

Fundy Biosphere Reserve

Réserve de la biosphère
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