Seasons in the life of a Tree

Introduction

Discovering something new about nature is not an easy task. It cannot be done casually. It requires a lot of observations from different locations/ places for a longer period of time to predict something about nature. Does the scientist do it all alone? No. For such observations scientists and sometimes, people across the globe come together and share their observations with each other. It avails large amount of data from different places, in large span of time.

As we know, we depend on trees in various ways to fulfill our needs. We always read about trees in books/ on the internet, but we ever tried to see how they get affected by changes in seasons?

Trees go through various seasonal changes. Which may directly or indirectly affects the health of a tree or may cause morphological changes. For example - in summer, some trees shed their leaves completely, while some tree starts flowering or fruiting. These changes may vary in different trees.

Materials required

1. Identifying at least one tree of the school campus or neighbourhood
2. Pen & paper
3. Ledger/notebook (1 per tree)
4. Data and photo uploading facility- directly through the Vigyan Pratibha website, Whatsapp, E-mail etc (Optional)

Task 1: Identify your tree

Choose any tree on your school campus/ immediate neighborhood. Choose a tree that you think **flowers/ fruits seasonally** and answer the following:

Q.1. What is the local name of your tree?

_____

Q.2. Can you guess how this local name arrived for the tree?

_____

Q.3. Can you see any flowers on your tree? Describe briefly.

_____

Q.4. Does your tree have any fruits? Describe briefly.

_____

Q.5. Trace the outline of a leaf/ Draw the structure of a leaf.

Q.6. Is there any insect, ants, beetles etc. on your tree?

Q.7. Is there any animal (e;g; birds, insects) near your tree?

Q.8. If yes, what did these animals receive from your tree?

Task 2: Predicting/Hypothesis-building based on the chosen tree

In this task we will predict what changes will occur at a particular month in a tree by answering the following questions.

Q.1. Does the tree have any seasonal flowering pattern?

Q.2. In which month/ months your tree will be flowering ?

Q.3. In which month/ months your tree will be fruiting ?

Q.4. Does your tree sheds its leaves in a year? When ?

Q.5. Does you tree sprout new leaves? When?

Based on your answers let us make a line-graph that can show changes occur in a tree with respect to months.

Task 3: Observation of tree for every week

i. Observe the tree for 10 mins every week.

ii. The Observation datasheet is provided for initial stage of observations is as follows:

Latitude & longitude of your school: _____

Month & Year: _____ Date:_____

Temperature (Maximum & Minimum): _____ Time: _____

Relative Humidity: _____ Season: _____

Sr. No.	Morphology	Detailed Description (Name of insect/ animal)	Observations		
			Many	Few	None
1	Flowering				
2	Fruiting				
3	Presence of New Leaves				
4	Presence of mature leaves				
5	Branches without leaves				
5	Presence of birds				
6	Presence of birds nest				
7	Presence of any animal around tree				
8	Presence of any insects near your tree				
9	Any other observations				

(If more than 1/3rd of the branches of the tree have even one fresh leaf each, then it is approximated as ‘many’. If equal to or less than 1/3rd of the branches have even one fresh leaf each, then it is classified as ‘few’. This same logic is applied to flowers and fruits as well.

During holidays students can coordinate with caretakers of schools to observe the tree. The teacher-coordinators in schools need to come up with creative methods to ensure this happens. If it is absolutely impossible to monitor your trees during holidays, then don’t worry: it’s better to have the information from the rest of the year than to have no information at all)

You can make your own datasheet for observations.

Task 4: Representation of Collected Data and share/ compare it with others

i. Students can represent their data after every three months using line chart.

ii. Students can share their data with other groups and find the differences.