seek by iNaturalist

A guide for teachers

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A guide for teachers

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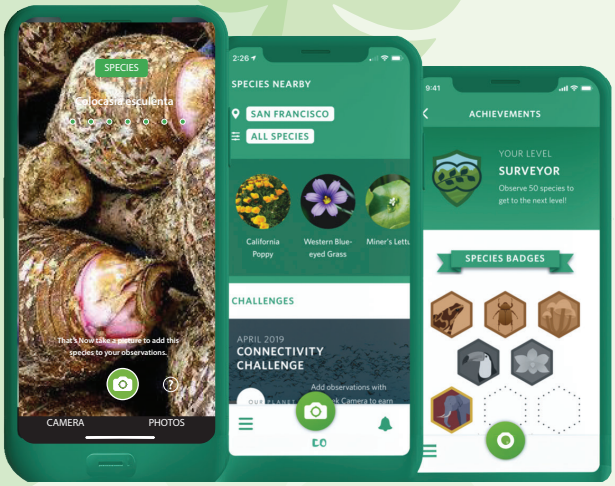
INTRODUCTION

Biodiversity plays a critical role in human health and well-being, influencing key factors such as nutrition, environmental quality, and ecosystem services. Early exposure to nature has been associated with numerous positive outcomes for children, including improved academic performance, physical fitness, and mental health. Therefore, introducing and raising young children's awareness and interest in biodiversity is crucial, and this can be effectively facilitated through its integration into both teaching and extracurricular activities.



i-Naturalist is a robust platform that connects users to the natural world through the science of biodiversity. It enables individuals to document and identify plants, animals, and fungi in their surroundings, contributing to a global database of species observations. The platform aims to raise community awareness of local biodiversity while encouraging further exploration of nearby environments.

This guide introduces Seek by i-Naturalist, a user-friendly mobile application that is part of the broader i-Naturalist ecosystem. Seek empowers students to explore and identify species in their everyday environments—whether in schoolyards, local parks, or nature reserves. Using computer vision, the app provides real-time species identification, and users can earn badges and participate in challenges as they document their observations. Seek offers an engaging and accessible way for students to connect with nature, making the learning process both educational and enjoyable.

This document is primarily written for teachers who wish to assess, edit, and compile student observations in the classroom during activities focused on exploring agrobiodiversity.

By providing detailed, step-by-step guidance along with illustrative images, this document offers a simple and efficient approach for teachers to categorize student observations into groups based on specific objectives, enabling them to effectively evaluate and compile information.

01.Guidelines

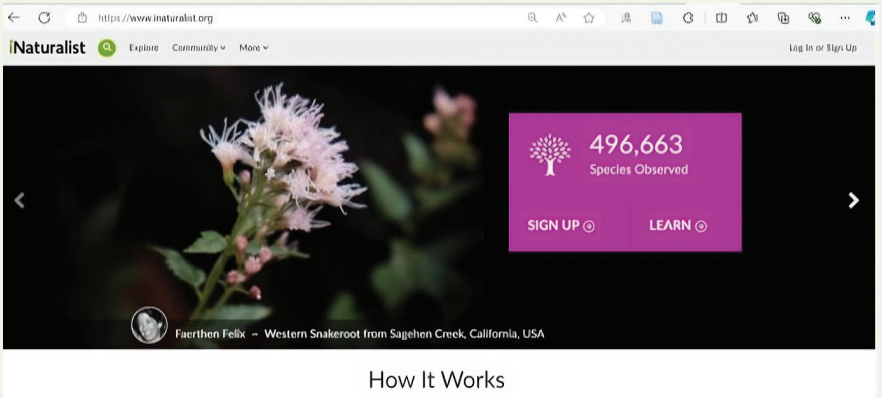
Assess and edit student's observations

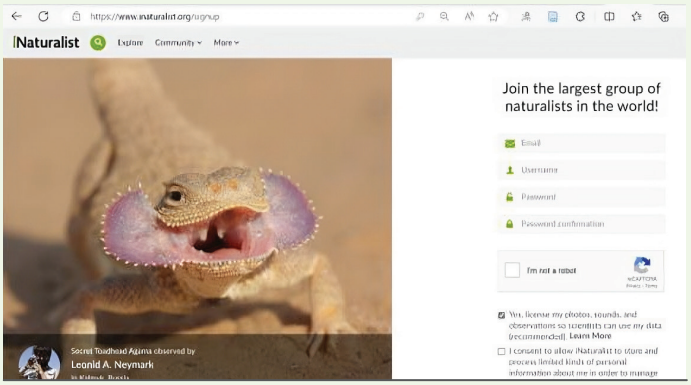
STEP 1

Go to website

https://www.inaturalist.org/ .

Teachers should create a shared account for all students in the class by clicking on SIGN UP section and follow the instruction. The credentials will be shared with the students expected to conduct the observations.



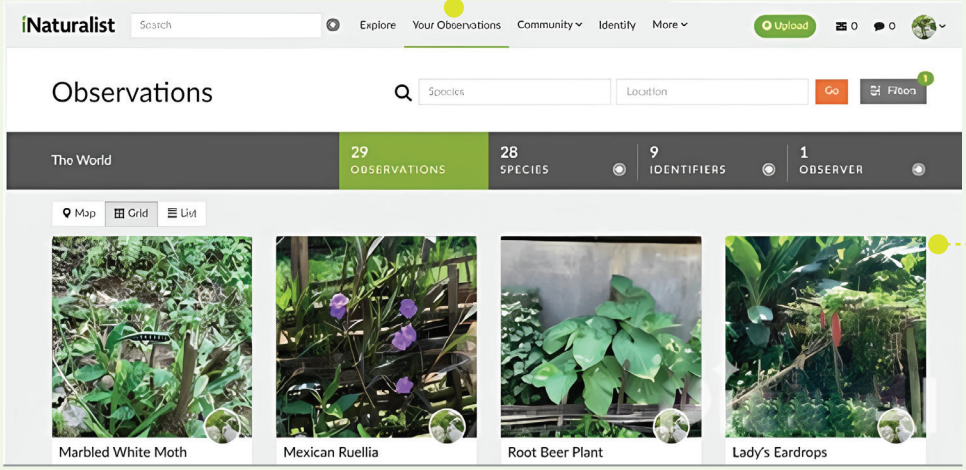


STEP 2

After logging with the class account, on the main page, select **Your observations.**

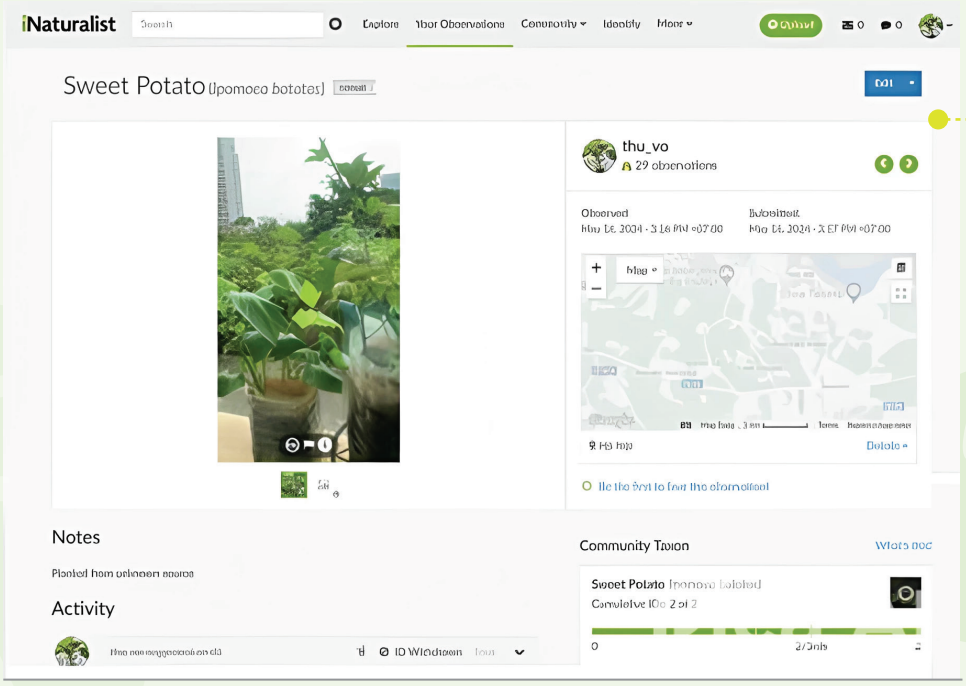
All observations uploaded by students will appear. Teachers can click on any observation to review its details. The teacher's primary goal is to assess whether the student's observation is satisfactory or requires correction. For example:

1 Select **Your observations**



2

Choose an observation to review, such as "Sweetpotato." The website will display detailed information about that observation.



3

Detailed information about the observation (Sweetpotato) will be displayed as discussed below.

The key components to evaluate in an observation include:

PHOTO

- If a photo does not meet the required standards, teachers should mark an "X" in the NOTES section of the observation. After reviewing all observations, teachers can reevaluate the unsatisfactory ones and exclude inappropriate observations.
- Check whether the photos taken by students meet the specified requirements and how to exclude unsatisfactory observationd (outlined in part 2).

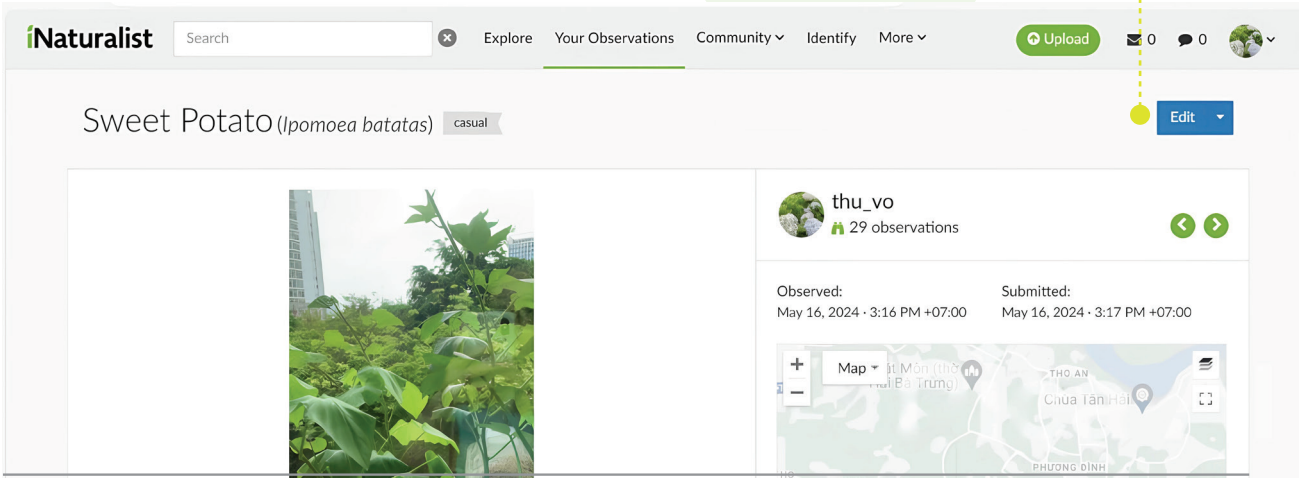
INFORMATION

- As specified in the document "A guide for students", students should write their name, group number, the name of the plant, and the variety name in the NOTES section (the latter only if the observed plant belongs to crops for which more detailed analyses is expected, e.g. Banana, Pumpkin, Taro, or Mong's Mustard in the case on NATURE+).
- Teachers should verify that the NOTES section contains the student's name, group number, plant name, and variety name (if applicable) written correctly.

STEP 3

If any information is incorrect, teachers should make corrections according to the instructions below.

1 Select **EDIT** on the observation page.



2

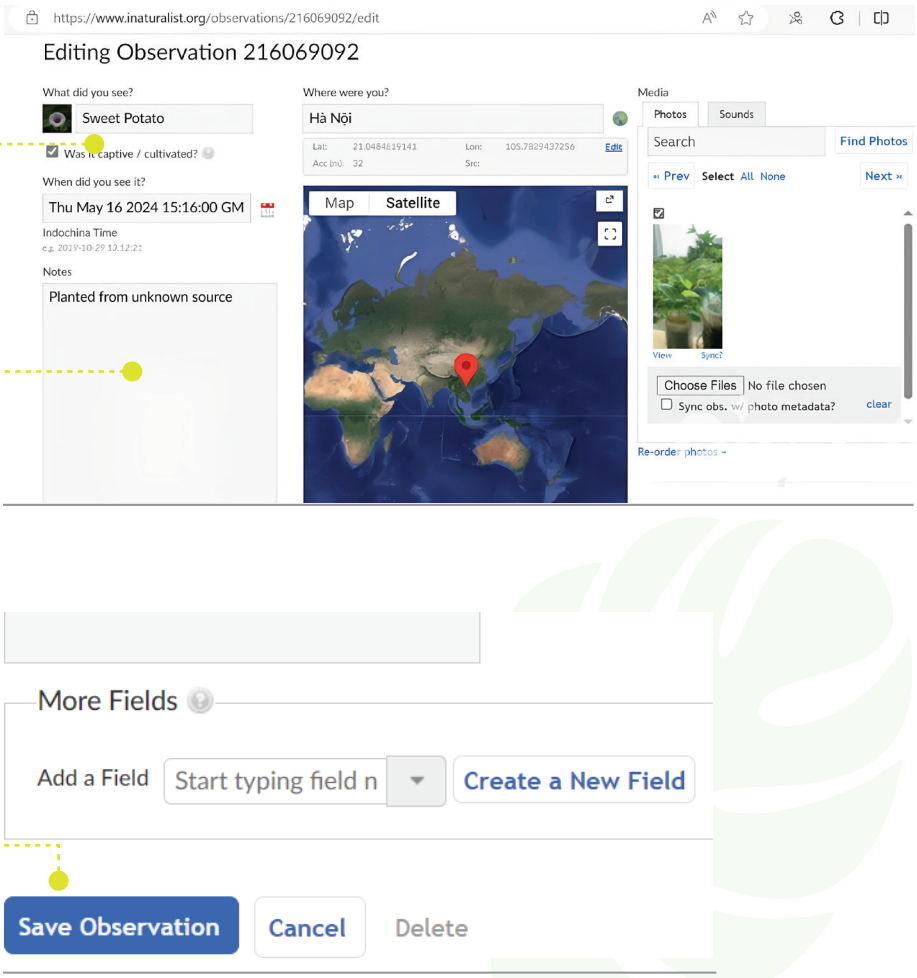
Correct the information
If the plant was cultivated (rather than wild) and the student failed to indicate this, the teacher should check this box.
If the plant is wild, do not check this box.

3

For the **NOTES** section, if students have made errors (e.g., misspelling their name, the plant name, or repeating words, or omitting the variety name for the four focus crops), teachers should correct these in the **NOTES box**.

4

After making corrections, teachers select **SAVE OBSERVATION** at the bottom.



02.Possible cases of unsatisfactory observation and how to exclude them

Possible cases of unsatisfactory observation

Teachers should mark an "X" in the **NOTES** section in the following cases:

X

Inappropriate photos:

Draft photos, test photos, non-serious photos, photos of subjects other than the assignment topic, i.e., plants in the garden (can be landscapes or people or animals)

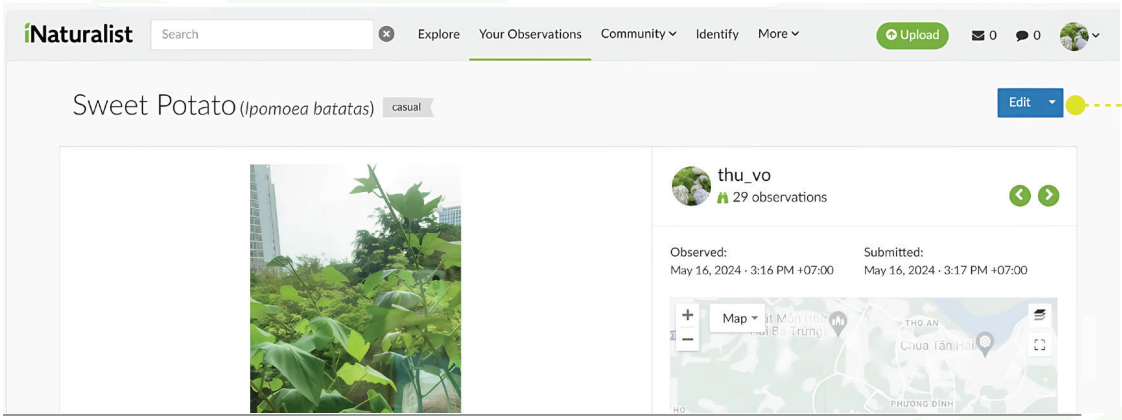
X

Poor-quality photos:

Blurry photos, photos of objects too far away, damaged or overexposed photos, photos of too many species in the same photo that are difficult to distinguish.

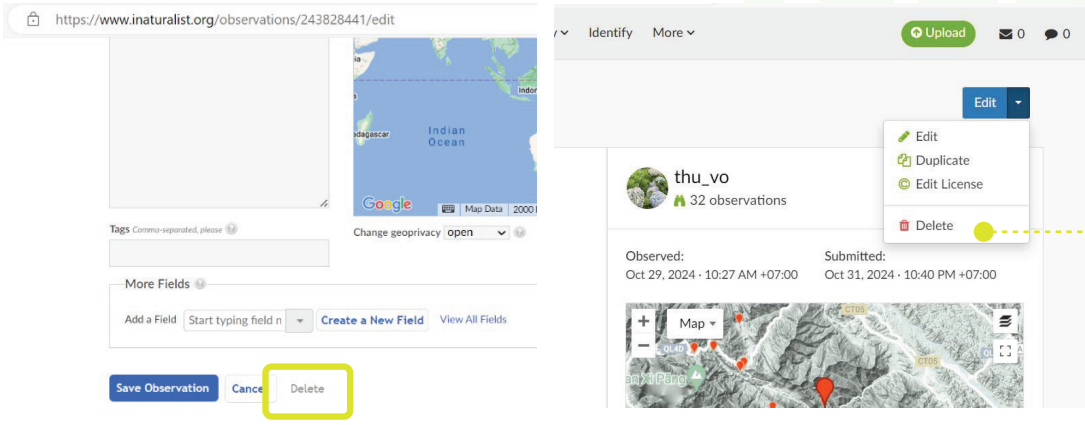
How to exclude them

If teachers want to exclude an observations, please follow the instructions below:



1

Select **EDIT** on the observation page.



2

Click **DELETE** and when a confirmation table appear, choose **OK/ YES**.

03.Evaluation of student scores/results

During the process of students collecting information about plants, the teachers should continuously assess the student's observations.

After a suitable period of time (depends on the teachers), there will be a final evaluation of the students work.

The classification levels of organisms are as follows:

Kingdom -> Phylum -> Class -> Order -> Family -> Genus -> **Species**

In which the priority classification level is SPECIES.

Students will be divided into group of 3-4 people and evaluated based on their group identification points (ID points).

Evaluation and Grading Critetia:

- The points will be calculated based on the number of plant types that students managed to identify to species level (the instruction on how to calculate the total number of Species observations will be presented in Part 5).
- The group with the highest ID points will be the winner.

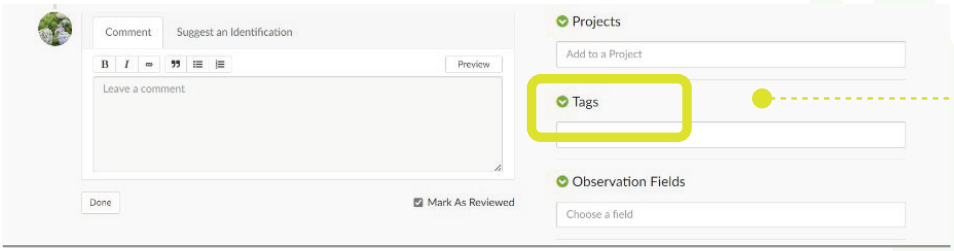
Examples:

Group 1 has 5 ID points, group 2 has 2 ID points, and group 3 has 7 ID points.

Among three groups, group 3 has the highest ID points thus group 3 is the winner group.

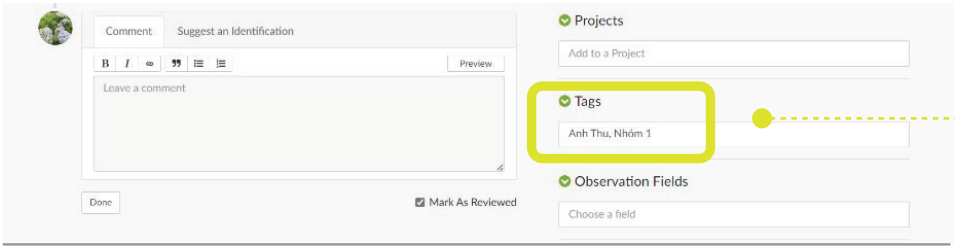
04.How to classify and count the total number of species of different groups

- Since students will write their name and group number in the NOTES section, the teacher can identify each student's observations.
- To aggregate all observations made by any groups, the teacher does the following:



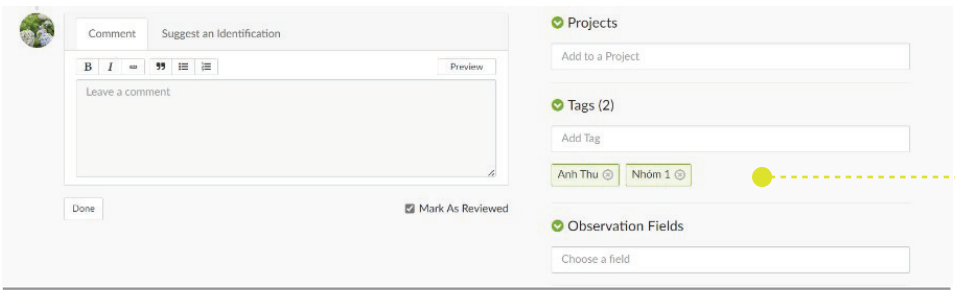
1

In the observation page, find the **TAGS** section.



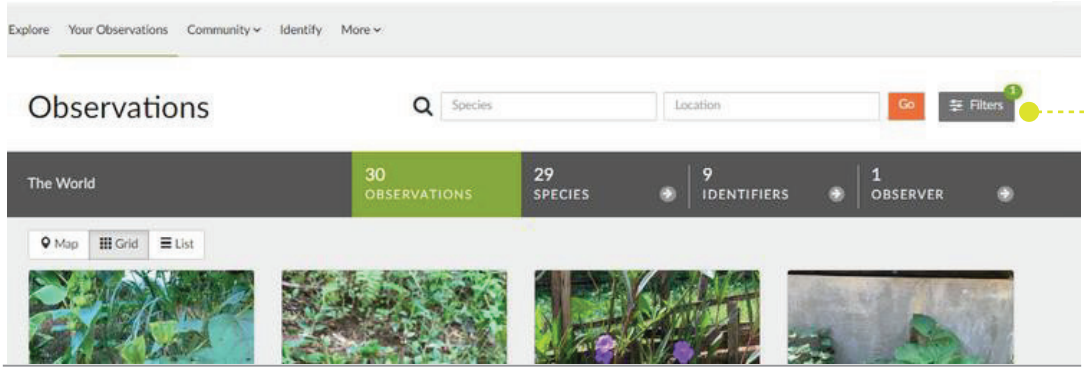
2

For examples, in the **NOTES** section, if the student writes "Anh Thu, Group 1, tomato," the teacher should add the student's name and group number in the **TAGS** section (e.g., "Anh Thu, Group 1") and press Enter.



Two additional tags will be as described in the photo.

Notes: Between Anh Thu and Group 1, there should be a comma (,) to separate them into two different tags.

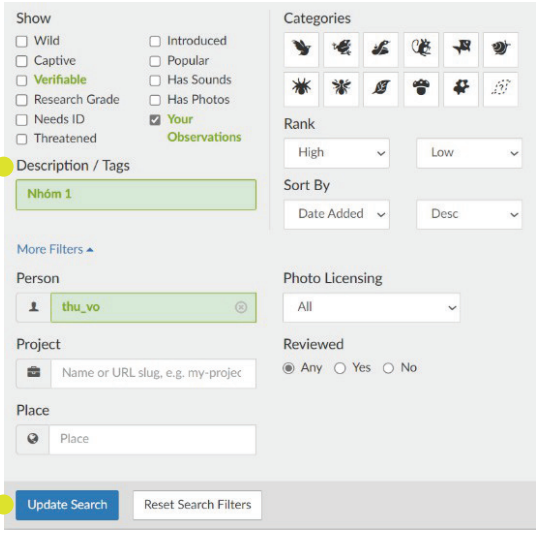


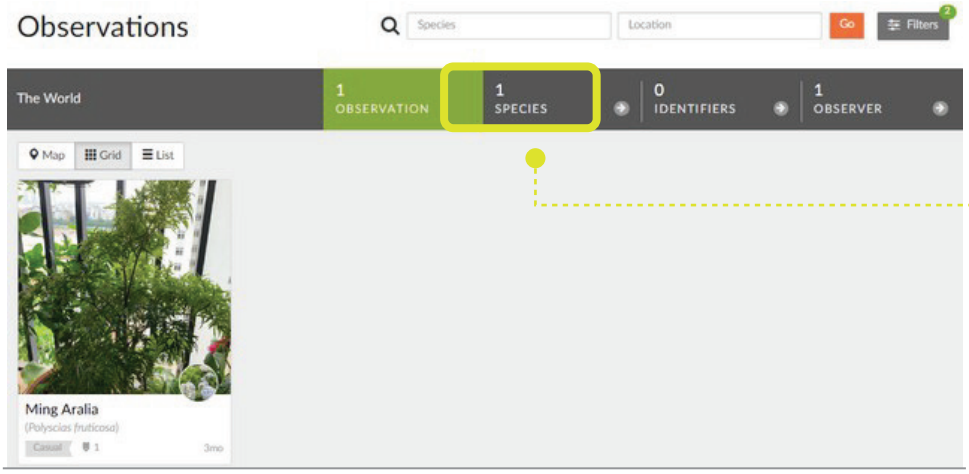
3

After adding the tags, return to the **YOUR OBSERVATIONS** page and select **FILTERS.**

4

In the **DESCRIPTION / TAGS** section, enter the desired group name (e.g., Group 1) and click **UPDATE SEARCH.** The web will show all observations associated with that tag.





5

Afterward, the teacher can see the total number of species identified by that group (species (1).
Each species identified equals 1 ID point, in this case, group 1 has 1 ID point.
Notes: In order to search for observations of any student or group, the teacher have to write the student's name or their group name exactly as they write in the tags.

Notes

This is a basic guide to adding tags to student observations so that they can be quickly filtered and summarized. Teachers can add other tags depending on their purposes to categorize and summarize results for their students.

05.Final evaluation of the assignment

Poster summarizing the identification results

After evaluating all the group's results, teachers and students can create a simple poster to present their findings. The content of the poster can be a simple summary of what the students have identified in their garden and a few photo of, for example, some of the plants they have identified and the way students taking picture of plants.

Some suggestions include:

- Total number of crops/plants identified by the class.
- The total number of species (for all plants) and varieties (i.e., for Banana, Taro, Pumpkin, and Mong's mustard in the case of NATURE+, comments can be added on varieties that are common or rare). For the definition of common and rare varieties, students and teachers can discuss and agree among themselves.
- Some photos about specific varieties identified by students in the homegardens.

Awards

After summarizing the results based on the ID points, there will be two awards:

For Most Species Identified: the group with the highest ID points.

For Most Varieties Identified: the group with the most varieties of focus crops (if any).

If one group satisfies both conditions (most species and most varieties), the Varieties Award will be given to the group with the second highest number of varieties.

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The International Potato Center (CIP) was founded in 1971 as a research-for-development organization with a focus on potato, sweetpotato and Andean roots and tubers. It delivers innovative science-based solutions to enhance access to affordable nutritious food, foster inclusive sustainable business and employment growth, and drive the climate resilience of root and tuber agri-food systems. Headquartered in Lima, Peru, CIP has a research presence in more than 20 countries in Africa, Asia and Latin America.
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