Youth Engagement with iNaturalist

Description

Previous activities help students to introduce the concept of biodiversity, as well as native and non-native species. Students will be able to build on their observation skills from the Scientific Sketching activity through the use of a technological tool and/or a field guide. By engaging with these tools, questions generated from individual students in The Three "I"s activity, or from the group in the Digging into Data activity, may be answered or expanded upon. Students will be able to see how they can contribute biodiversity data and help be a part of answering not only their own questions, but also those of local organizations and researchers.

Objectives

Student Objectives	Learn how to use iNaturalist.	Core Activity: Contribute Data
	Practice using tools and protocols.	Key Youth Practice: Take ownership of data quality
	Learn what a native, non-native, and invasive species is.	Core Activity: Develop expertise
Educator Objectives	Connect students' observations to their biodiversity questions.	Key Educator Practice: Position youth as people who do science

Key Vocabulary

Biodiversity, organism, pollinator

Instructions

Time

1 hour

Materials

- Smart phone, iPad/tablet, camera
- If without devices or cameras, print enough copies of the Maine Audubon iNaturalist worksheet for each student
- Print the species list, enough for about half the students
- White board and marker
- Print out a copy of the Key Tips for Perfect Observations
- Print enough copies of either the Clear Lake State Park Scavenger Hunt, a 3x3 Bingo, or 5x5 Bingo

Getting Ready

- Pre-download the iNaturalist app to any portable devices students will use.
- Create a single iNaturalist account and use that account to log in on all of the devices students will use
- Familiarize yourself with how to use iNaturalist using the quick guide or the in-depth guide
- Practice making your own observations.
- Read the teacher's guide from iNaturalist.
- Review the data from the Biodiversity of Lake County, CA iNaturalist project.
- Scout out the area for the activity and familiarize yourself with the organisms the students are likely to observe. Some educators have students take photos, and afterwards educators review and submit the highest quality, appropriate photo for the species.
- Check the wifi availability and service at your site. The app can be used offline, and synced once you get back into internet range or cellular reception. Make sure you're allowing iNaturalist to access your location, and that you have location services turned on for your device.

Optional Pre-Activity

If you had students take photos of the organism they used during the Scientific Sketching activity, you can skip down to the Reflection portion of the activity instructions.

Facilitation

Explain that students will record observations of organisms by uploading photos from their devices to a platform called iNaturalist. These observations help document biodiversity where they live. Introduce the Key Tips for Perfect Observations. They will work with their classmates in using iNaturalist to document and identify the organisms of your site.

Set a boundary for exploration. Students can work alone or in pairs and use the Clear Lake State Park Scavenger Hunt, a 3x3 Bingo, or 5x5 Bingo to prompt students' search for organisms within

this boundary. They should take a photo of each organism they find that matches the description on the worksheets.

After 15 minutes of exploration, bring the group back together. Explain that students will now work to identify their organisms. If you're in a location without internet service, you can take geolocated photos that can be uploaded once in service. You may also use the species list to ID some of the more common organisms, or use this Maine Audubon iNaturalist worksheet if there's no internet or service. If you're in a location with internet service, allow students to upload their photos to the class iNaturalist account. If using the bingo cards, you can check to see which of the students got bingo. Walk around between groups and write down species as they are identified on the whiteboard.

Reflection

Once the students have uploaded their observations, have them tell you the rest of the organisms they observed to fill out the class list on your whiteboard. Once it's completed, pass out the species list and have students look through it and see if there are any matches to the list you created on the whiteboard. Indicate on the whiteboard as they call them out whether they observed a native or non-native species.

Discuss the difference between a native and non-native species, and why there are certain non-native species that we are watching out for. Show students the Biodiversity of Lake County, CA iNaturalist project. Walk through some of the projects listed on the Leaderboard. Together as a class, read about the organizations that are using the different projects, and what those organizations are using the iNaturalist data for. Some examples to highlight include the McLaughlin Natural Reserve, Flora of Highland Springs Recreation Area, and Clear Lake Fish Kill Monitoring Project.

Optional Post-Activity

Alternatively, you can make an iNaturalist project for your site and view the most recent contributions as a group, or have students find their own observations within the project. Have students research one of the organisms they found on iNaturalist. Put the photos and facts from each student's organism into a field guide of the site's species. You can connect the importance of creating a species list, using an example like the Clear Lake State Park Plant List, by discussing with students:

1. Why is it important to monitor biodiversity?
2. How do we measure changes in biodiversity over time?