

GETTING READY FOR YOUR GEN CLUB!

STANDARDS CHECKS Monitoring the Environmental Health of Your GEN Club Site

Garden Earth Naturalists learn that their club sites are ecosystems that provide life support functions. These life support functions support all life – this includes all living things on earth, even you. We can call these life support functions “services” that the Earth provides for us – free of charge. But all ecosystems are not the same. Healthy ecosystems are better at providing these life support services than damaged ecosystems. How do you know if the ecosystem on your site is healthy? Is it in good shape?

Get Ready! This section contains information for club leaders on getting ready for their GEN Club. Included is information on preparing a site map, selecting ‘Checkpoints’ to collect environmental data at your site as well as information about the ecological Standards Checks. These ‘checks’ will help you and your learners monitor the health of your site from year to year.

When people want to know if they are in good shape, they go to a doctor and have a “check-up”. The doctor will monitor your heart, look at your eyes, and do several other tests. We can also do tests on ecosystems to check how well they provide those free services. We hope that with your help, each year your club site will get better at providing free services to earth’s creatures!

With activities referred to as **Standards Checks**, GEN Club members conduct tests and collect data to monitor the health of your club site ecosystem. The tests are called “standards checks”. The information or data collected the first time is “baseline data”. For example, a set of baseline data for the Pollination Department would be the number and types of pollinators found at a Standards Checkpoint on a certain date.

Garden Earth Naturalists conduct the same Standards Checks each year and compare the new data to the baseline data. This provides a way to know if your club site is getting better at providing services to Earth’s creatures! In order to see and quantify the positive impacts of GEN members at their school or community site, children perform the Standards Checks on a regular basis. The collection, maintenance, and analysis of this data strengthens science process skills and provides positive reinforcement to learners for all their hard work! Below is information on preparing a map that is needed for many of the standards checks, as well as information on selecting sites to conduct the standards checks.

Preparing a Map of your GEN Club Site

You can order a map to your specifications (size, features, etc.) through your county planning office. All counties have maps of properties and land features which are considered public record and therefore available to the public. Many counties have a GIS department within their planning office to specifically direct your request. Availability of maps may vary from county to county, and many counties will print large maps for a fee. The cost may vary depending on size and features included. Many planning offices have free printer services available to the public for making 8 ½” x 11” prints. Alternatively, you may choose to receive your school map from your county planning office as an electronic file. A disk or flash drive containing the file could then be taken to a print shop such as Kinko’s to be printed. This may be more cost effective, especially if your Club is not located near your county office.



For Clubs at schools that have instructional technology classrooms, computer labs or media centers with a number of computers that could be reserved for Club member use at a Club meeting, consider downloading a satellite image of your Club site with Google Earth. In addition to being a beneficial (and exciting) exercise for your Club members, Google Earth is easy to use at no cost. This map can be saved as an electronic file onto your school computer and printed at school or saved on disk or flash drive and taken to a print shop for a larger size.

Another option for schools with several available computers would be to create your own map using Microsoft Publisher or Paint. These maps would most likely be less detailed, giving approximate locations of buildings, walkways and driveways, playgrounds and planted areas. It would be a great exercise for Club members in designing and using these applications, which are user friendly and available with Microsoft software packages installed on most computers. Club members could work in teams to take measurements and design the layout. Team maps could be presented and one map chosen to be the official club site map or features from several maps incorporated into one official Club site map. Again, Club members could work from small maps printed at school or the map could be printed at a print shop from an electronic file.

Choosing Checkpoints

The first time that Standards Checks are conducted on a Club site, they are referred to as “Baseline” Standards Checks. The data collected from the Baseline Standards Checks determines what changes if any should be made to the Club site at the Standards Check Site. For example, if the soil in one area where Standards Checks are conducted is poor, it may be determined that amendments should be added to the soil. The next time the Standards Checks are done, hopefully some improvement in the soil will be observed. Standards Checks should be repeated annually around the same date and preferably semiannually if time permits. Conducting Standards Checks two times a year would provide another parameter of season by which to measure the characteristics of your club site ecosystem.



Explore your school grounds to discover the best places your Standards Checks sites. Identify three different locations on your school site. Once the locations are chosen, determine sites within these locations where the actual Standards Checks will take place. The sites that you and your GEN Club members choose should be out of the way of foot traffic but still in an area that will be good for data collection. Keep in mind that the sites will remain

in place for years to come. When the three sites are chosen, they can be marked with official trail markers.

Next, add the three official locations for Standards Checks Sites at your school to your Club Site map. Try to make your maps as accurate as possible. For example, if the line for your line transect will run northeast southwest 5 meters away from a tree, make the adjustments to your map accurately depict this. This will require measurements to be taken and use of a compass, GPS unit or other instrument for directional information. Be sure to include notes regarding why certain locations chosen and other observations. The intention is for these sites to be used years to come. It will be good for future GEN Club members to understand the reasoning behind choosing a certain site.



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NOTE: Use the following two tables to examine your site as you choose locations for eco-service Checkpoints on your Club Site.

EXAMINING YOUR CLUB SITE AS YOU CHOOSE CHECKPOINTS – TABLE 1

Garden Earth Department	Features to Look for on Your Site	Related School Site Organisms
Air Cleaning Department	Trees and bushes	Trees Shrubs Other green plants
Food Production Department	Grasses or trees that produce seeds; animal signs such as tracks, nests or holes in the ground; a place where an animal such as a bird, a mouse or insect might live or a sign of an animal eating another animal or plant	Birds Small mammals Insects Lizards, frogs
Pollination Department	Flowers, trees and shrubs that attract pollinators	Bees Butterflies Beetles Wasps Flies Hummingbirds
Pest and Disease Control Department	Damage to leaves from chewing insects Invasive plant pest such as kudzu, privet hedge or Japanese honeysuckle Exotic insect pests	Bats (eat mosquitoes) Bluebirds (eat mosquitoes) Chewing insects Gypsy moth nests Fire ants mounds Armadillo holes
Biodiversity Department	Areas with a lot of vegetation will attract more insects and wildlife and hence; have greater biodiversity than areas with just once plant species such as a grass lawn	All plants and animals on your site.
Water Purification Department	A wetland on your school site. After a rainstorm look for areas where water collects in low areas or around downspouts from your school roof. The entire school site is a watershed. Do you know what watershed your school is located in?	Fish, crawfish, snails, insect larvae
Soil Department	Any area on your school site has soil. A wooded area should have more soil organisms than an area such as a sports field that has a lot of foot traffic.	Worms, sowbugs, beetles, termites, cockroaches, spiders

EXAMINING YOUR CLUB SITE AS YOU CHOOSE CHECKPOINTS – TABLE 2

STEWARDSHIP PROJECTS
Service Learning

LOCATIONS

Where Eco-services are Provided

ISSUES

Threats to Life Support

