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# Creating Sustainable School and Home Gardens: **Using Trail Cameras**

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Trail cameras (also called game or wildlife cameras) have been used for decades to document wildlife for personal use (for example, identifying key areas frequented by game animals), education, and scientific use (documenting distributions of animals around the world for conservation). They are typically mounted on trees or other stable surfaces, and they automatically take a photo or video of a subject in front of the camera when motion triggers the sensor. The user sets the trigger sensitivity, sound, image/video quality, and day/night modes. Using a trail camera can allow us to see the biodiversity around us when animals think no one is watching!

## Choosing the Right Trail Camera

Consider the following when evaluating trail cameras for purchase. The editors at *Outdoor Life* offer 10 Things to Consider When Shopping for a Game Camera that overviews camera features.

- ***Image and video resolution*** - Consider a balance between photo/video size and quality. Your best bet is to have multiple options, including high resolutions for videos such as >1080P. An optional video feature in a camera offers a fun way to see animals in action.
- ***Memory card size*** - Make sure to purchase a memory card that suits your needs for the image quality you hope to capture and the time it will be running. You may find, after using the camera, that a larger memory card suits your needs better. Having multiple cards on hand will allow you to

*A trail camera is securely attached to a fence post rail.*

interchange them and view the images while the camera continues to run on a different card. If you are shooting photos at 8MP, a 16GB card can hold 6,000 photos, but it will store only half that many at 16MP. Videos take up a lot of space, so go big if you plan on taking videos. Most cameras use standard SD or microSD cards that are easily upgraded.

- ***Infrared-IR (nighttime/no glow) photo abilities*** - Many mammals are only active when humans are asleep! Avoid cameras that flash as it can spook the animals (although they can provide color night images).
- ***Trigger speed*** - We recommend 0.2 second or less so you can quickly capture the mammals before they run off. Recovery time (the time it takes for it to be able to take another shot) is also something to consider. Some cameras take multiple shots quickly (burst mode) for the same trigger. This can be a valuable feature.
- ***Triggering distance*** - If you are setting up your camera in a place that is not very open, closer range is more essential than having one that can detect things far away. For flexibility, 50 feet is more than enough.
- ***Batteries and battery life*** - Choose a camera that can use easily replaceable batteries, such as AA or AAA batteries, and is efficient with battery use.
- ***Built in viewing screen*** - Having the ability to check quickly if your camera is working in the field without removing the card is a great feature, but not required.


*An old fox is captured by the camera at night.*


*A rabbit grazes in front of the camera.*

## Tips for Use

- Have an SD card reader or adapter on your computer for optimal viewing when reviewing images.
- Make sure to mount it tightly, so it doesn't fall and damage the camera and microphone. Use weatherproof materials to mount your camera.
- Mount the camera low to the ground at the height of animals you might observe.
- Using baits is a common practice to attract wildlife for more frequent photos. Beware of harming wildlife when using baits (creating dependency and losing the fear of humans). Only give them things they might be able to find in nature, and never feed them processed foods, cooked foods, or trash.

*A young girl adjusts a camera in her garden.*

# Fun Facts

- A trail camera can help us to know what types of animals we can see and hear around us.
- Some animals fear humans and won't come out unless it's clear; with a trail camera we can see what goes on when we aren't there.
- Trail cameras are often used to help conserve and monitor wildlife populations. You can participate in these efforts too! See the *PBS News Hour's* Student Reporting Labs video Camera Traps Help Citizen Scientists Count Critters and Document Change.

# Resources

## *References*


- Schuttler, S., Glenn, D., Belair, C., Hohm, J., Humphries, D., Pasion, D., Dunn, R., & Kays, R. (2017). What's in your schoolyard? *Science Scope*. https://digital.nsta.org/publication/?i=429258&article_id=2848758
- Nugent, J. (2021). Citizen science: A window to the wild. *The Science Teacher*, *88*(3), 12–13. https://doi.org/10.1080/00368555.2021.12293578


## *Guides*

- Critter Cam Kit Activity Guide, U.S. Fish and Wildlife Service
- How to Use Trail Cameras for Backyard Wildlife, Mississippi State Extension

## *Citizen Science Projects Related to Wildlife Cameras*

- eMammal
- Snapshot USA, Smithsonian Institution

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