Individualized Education Project

This semester I decided to use a trail camera for developing interest in a unit on Sitka blacktail deer. The idea began when I stumbled across a local facebook page dedicated to posting photos of deer, wolves, and black bear that were captured using a trail camera. The facebook page is titles Alaska Trail Cams and is operated by a local man living in Ketchikan, Alaska.

Before I could materialize the idea of using a trail cam to develop interest in an upcoming unit, I had to get acquainted with the trail cams I planned to use. Klawock School has two trail cams for use. These cameras are made by Moultrie, an outdoor gear outfitter dedicated to hunting products. Both cameras are M-990i’s and from my research are some of the higher rated cameras on the market in the $100-$150 price range. The cameras are stocked with two light sensors, an LCD display, mode and navigation buttons, and an LED flash for pictures taken in the dark.

My first task in setting the cameras up for field operation was to figure out the mode of operation I wanted. The cameras have several capture modes to choose from including motion detect, time lapse, hybrid cam, and video. I chose motion detect as I was not sure how much animal traffic was in the area and did not want to sort through hundreds of empty pictures. Next I had to decipher the necessary image quality. This may seem like a carefree step, however depending on the capture mode entered, photo quality could greatly affect storage space on your SD card. I researched the capacity of my SD card and referenced some online chat communities regarding memory consumption and photo quality before deciding on the four megapixel option rather than the enhanced ten megapixel option. Moving on, I selected the three-shot fast option under the multi-shot feature. This feature enables the camera to take a three-shot burst after detection of motion. .

Other features that I did not use include motion freeze, digital zoom, video resolution, video length, video audio, and photo delay. Another great feature is the time-lapse option. This feature enables the camera to take a photo at a specified interval during the day. This could be used in discovering patterns of deer according to time of day, or season of the year. This function must be calibrated according to time of sunrise and sunset. After calibrating, the time-lapse feature can be set to a frequency of five to sixty seconds. The duration of the time-lapse feature can also be set from all day to one to four hour intervals.

These cameras are great in developing interest. After one weekend we checked our cameras to find that seven different deer had been captured. My students were amazed that we had captured so many and took joy in reviewing the images. Only one deer was captured on both cameras and left my class posing questions of his daily habits. Recent tracks in the area from the night before lead us to believe that some of the males had been fighting in the area the night before and times of images captured of deer allowed us to hypothesize which deer may have been battling and at what time in the night.

These cameras could be used to discover behaviors of local animal species, develop a time lapse of the inter-tidal zone, or reveal a process of decomposition. Photos taken by these cameras could be used in support of an essay on animal behavior, or to discover timing of the migration of spawning pacific salmon in local streams. Students may also find ways to show that bears improve forest health by depositing nutrient-rich salmon carcasses in the riparian zone of streams. By using these trail cameras as tools, my students can express their content knowledge while displaying individual skills and points of view.

These cameras would be a great tool for possible science fair projects. Students may use the cameras to document additional evidence in support of their hypothesis. These cameras could also be used to document the scientific process used in creating and carrying out their experiment.