Quick & Easy Habitat Education Activities
Monitoring Stations
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### Description:
Students implement their monitoring plan as developed in Monitoring Inspiration by setting up several different types of monitoring stations in the habitat area and beginning monitoring activities. Students return to stations over a period of time and record information which can be used in reports about the habitat area.

### Objectives:
- Students understand that information gathered through monitoring can show changes and conditions in the habitat area that can measure the health of the habitat.
- Students build skills using scientific equipment to make observations for evaluating changes and conditions in the habitat.
- Students share their information with others.

### Print Materials:
- Master: ‘Plot Monitoring Record’, ‘Arthropod ID Sheets’
- Kit Materials:
  - Thermometers: soil and air: 1 each (to be shared by plots) or 1 per plot team
  - Laminated copies of Arthropod ID Sheets: 1 set per plot team

### Teacher Supplied:
- Copy: ‘Plot Monitoring Record’: 1/plot
- Arthropod and wildlife field guides
- Materials as needed for selected stations (as described in Monitoring Inspiration)

Note: The activity as described requires materials for: Temperature Monitoring, Photographic Monitoring, Woody Debris, Soil Invertebrate, Insect Pit Trap and Bait, and Plant Growth Monitoring stations

### Before activity:
Evaluate student monitoring plans; research and gather resources as needed. A variety of monitoring activities may be implemented as described below, or modified based on available resources and time commitments. Prepare materials needed to create monitoring stations (see ‘How-to-do Activity’). Review ‘Plot Monitoring Record’ in light of selected monitoring activities to determine which areas students will need complete. (Note: The form is divided into ‘letters’ to assign tasks, if needed.)

### Activity:
- Go to ‘Demonstration Plot’ with students. Pass out a ‘Plot Monitoring Record’ to each team. Demonstrate setting up monitoring stations. For each type of monitoring activity discuss what type of information this will reveal, how it relates to other monitoring activities and how and where to record information on the ‘Monitoring Record’ for each station:
  - **Air and Soil Temperature-** Show thermometers and demonstrate their use.
  - **Photo-monitoring Stations-** Show students how, and from which directions, to take photos.
  - **Visual Observations of Wildlife-** Before entering plot, carefully look to see if there are any signs of wildlife such as flying insects, ground insects, birds, tracks, scat, or other observations indicating the presence of wildlife.
  - **Woody Cavity Station-** Show students how to dig a small hole under the woody debris without damaging plants, then place woody cavity over hole securely, leaving an opening for small animals to get underneath.
  - **Soil Invertebrate Station-** Dig a hole in the plot about the size of the pit trap container. Place the soil on a plastic sheet. Demonstrate looking for invertebrates in the soil. Do not replace soil yet.
  - **Insect Trap Stations-** Demonstrate placing the pit trap container in the hole dug for the ‘Soil Invertebrate Station’, describe and place insect bait inside and cover with 6” tile or wood lid for next day observations. (Note: If you plan to return the next day set up the insect traps. If not, tell students they will not place their trap today, but will in the future.) After removing the demonstration bait station, refill the hole with saved soil and cover with 6” lid as a reference point.
  - **Plant Growth Stations-** Use plant labels to mark six or more plants of different species within the plot. Record letter and name of plant on form. Show how to measure and record plant growth information.
- Have students set up monitoring stations in their plots.
- Ask students to fill out the ‘Monitoring Record’ form as tasks are completed (confirm that data is complete).
- Return to monitoring stations as scheduled in the monitoring plan. Share findings and draw conclusions about the success of the restoration efforts.
- Plot Journal prompts: Describe how one set of data relates to another. What conclusions can be drawn from the data being collected?
- Plan and implement a report or presentation to share findings with the public, stewardship group or parks.

### Vocabulary
Station: a place for specialized observation and study of scientific phenomena.

### Washington State EALRs
Science 1.3.10 Understand how organisms in ecosystems interact with and respond to their environment and other organisms. Explain how an organism’s role and non-living factors contribute to the stability of an ecosystem. 2.1.2 Plan and conduct an observational investigation that collects information about characteristics or properties. Collect data using simple equipment and tools that extend the senses. Generate a logical plan for a simple field investigation with the following attributes: Identify multiple variables; select observable or measurable variables related to the investigative question. Science 2.2.2 Understand that scientific facts are measurements and observations of phenomena in the natural world which are repeatable and/or verified by expert scientists.