**Description:** Students form teams to select and layout observation study plots in the habitat area which will be used for ongoing observation and monitoring stewardship activities. Students create a plot map and mark the four directions on their map. Students begin to journal about their plots.

**Objectives:**
- Students begin ecological observations of a select site within the habitat area.
- Students apply knowledge gained from previous activities.

**Print Materials:**
- ‘How to do Activity: Plot Layout’
- Master: ‘Role Card’, ‘Plot Map’

**Kit Materials:**
- Radius Twine: 3’, 4’ & 6’ lengths: 1 per team
- Cloth tape measure: 1 per team
- Wood survey stakes to mark plots: 1 per team for circular; 4 per team for rectangular
- Hammers to place stakes: 1 per team
- Paper/ pencils for plot drawings: 1 per team
- Indelible pen or metal tag to label stakes: 1 per team
- ‘Plot journals’ for use throughout plot studies: 1 per student
- Habitat site map to record location of plots

**Vocabulary**
- **Habitat restoration:** bringing back an environment to its former condition and existence for animals and plants to live and grow
- **Monitor:** to watch, keep track of, or check usually for a special purpose
- **Stewardship:** the act of caring for a place; in habitat restoration this includes monitoring, education outreach, planting, weeding, mulching, advocacy, etc.

**Washington State EALRs**
- **Mathematics 1.3** Understand and apply concepts and procedures from geometric sense. Construct simple shapes using appropriate tools.
- **Science 2.1.2** Understand how to plan and conduct simple investigations.
- **Geography 1.1.1b** Use basic mapping elements to construct a map that displays information about school grounds, a neighborhood, or a local community.

**Science Kit: Land and Water**

**Before Activity:** Consult with restoration community group or park staff to determine best location and size of student plots. Determine whether students can assist with stewardship activities such as non-native plant control, mulching, and planting enhancements. (Note: If no restoration site is available, it is possible to select plots in a natural area for observation and monitoring studies only, though using stakes to mark the site may require permission.) Determine whether plots are to be circular (best for plot studies in existing restorations or habitat areas with minimal stewardship activities), rectangular or square (best when doing a new restoration requiring all areas to be planted and maintained). Establish a demonstration plot for use while teaching about the activities (see ‘How-to-do Activity’). Seek assistance from community group or park staff in helping to layout plots with students.

**Activity:**
- Create ‘plot stewardship teams’ of students that will work together throughout the plot stewardship activities.
- Pass out a ‘Role Card’ and ‘Plot Map’ to each team. Have students choose who shall be Marker, Measurer, Surveyor and Mapmaker.
- Demonstrate to students in a ‘Demonstration Plot’:
  - How to layout and mark their plots (see ‘How-to-do Activity’)
  - How to locate the four directions (remind students of the Four Directions Walk activity).
  - How to create a plan map of their plot identifying the four directions (see ‘How-to-do Activity’)
- Have students layout and mark their plots, locate the four directions and create a plot map. Provide assistance as you move from plot to plot, reviewing for accuracy, appropriate name, etc.
- Ask students to evaluate the ‘aspect’ of their plots and make predictions about the influence of aspect on plants and wildlife in their plots. Have students enter their predictions in their plot study journals.
- Gather students together to compare differences and commonalities between their plots. Ask them to share their predictions about the influence of aspect on their plots. Discuss how their evaluation of aspect is relevant to their stewardship activities.
- Check to make sure stakes are clearly marked and installed well. Have students return tools to the proper place. Leave center stakes in ground for all future activities.
- Student Journals: write an expository entry: Why they chose the name of their plot, a description of the plot and its physical characteristics, including its aspect.
- As students write in their journals, record location of plots on a project map in the event stakes are removed and lost.