



Land Cover

[Sample Site Selection and Set-Up](#)

Students select a 90 m x 90 m homogeneous site to carry out the Land Cover Sample Site Protocol and set-up the site to take the appropriate measurements.

[Investigation Instruments: The MUC System](#)

Students learn about the MUC System, how it is organized and how to use it in identifying land cover types.

[Investigation Instruments: Clinometer](#)

Students learn how to make and use clinometer.

[Investigation Instruments: Densiometer](#)

Students learn how to make and use a densiometer.

[Investigation Instruments: Compass](#)

Students learn how to use a compass.

[Investigation Instruments: Pacing](#)

Students learn how to determine their pace.

[Investigation Instruments: Tape Measure](#)

Students learn how to use a tape measure.

[Land Cover Sample Site Protocol](#)

Students locate, photograph, and determine the MUC class for 90 m x 90 m areas of homogeneous land cover.

[Biometry Protocol](#)

Students measure properties of vegetation and identify species in order to classify land cover using the MUC System and to provide supplemental information about their site.

[Fire Fuel Ecology Protocol](#)

Students take additional measurements of fire fuel at Land Cover Sample Sites.

Phenology

[Green-Up Protocol](#)

Students monitor the budburst and growth of leaves of selected trees, shrubs or grasses.

[Green-Down Protocol](#)

Students monitor the change in color of selected leaves of trees, shrubs or grasses.

Ruby-throated Hummingbird (RTHU) Protocol

Students observe the arrival and departure of Ruby-throated Hummingbirds, monitor hummingbird visits to flowers and feeders, and observe nesting behavior.

Lilac Phenology Protocol

Students record the five pheno phases of either common or clonal lilac plants.

Phenological Gardens Protocol

Students plant a garden and observe the flowering and leaf development stages of specified plants throughout the year.

Seaweed Reproduction Phenology Protocol

Students collect specified seaweed species and observe the reproductive phenological phases of the seaweed.

Arctic Bird Migration Monitoring Protocol

Over the year, students observe when specified migratory bird species first arrive and count their numbers until few or none of them remain.