DEACTIVATED PROTOCOL: The GLOBE Biosphere Protocol - Lilac Phenology has been deactivated as of September 2023. To learn more about the Deactivation Process, please visit the GLOBE.gov website.

Site Definition Sheet

*** Required Field**

School Name: _____ Site Name:_____

Choose a unique name based on location, e.g. "Grassy area - Front of School"

Names of students completing Site Definition Sheet: _____

Date: Year_____ Month_____ Day____ Check one: ❑ New Site ❑ Metadata Update

***Coordinates:** Latitude: _____˚ ❑ N or ❑ S Longitude: _____˚ ❑ E or ❑ W
Elevation: _____ meters

***Source of Location Data** (check one): ❑ GPS ❑ Other _____

Comments: _____

_____

Site Type (select all that apply based on intended measurements, then complete the necessary fields below): ❑ Atmosphere ❑ Surface Temperature ❑ Hydrosphere
❑ Biosphere Land Cover ❑ Biosphere Greening ❑ Biosphere Phenological Gardens
❑ Biosphere Lilacs ❑ Soil (Pedosphere) Characteristics
❑ Soil (Pedosphere) Moisture and Temperature ❑ Soil (Pedosphere) Frost Tube

Cover type (Select one): ❑ Short grass (< 0.5m) ❑ Tall grass (> 0.5m) ❑ Barren land
❑ Sand ❑ Closed Forest (Trees interlocking) ❑ Woodland (Trees not interlocking)
❑ Shrubs ❑ Dwarf Shrubs ❑ Flowering Plants ❑ Wetland ❑ Cultivated Agricultural
❑ Cultivated Recreational ❑ Open Water ❑ Bare Rock ❑ Urban Residential
❑ Urban Commercial ❑ Asphalt ❑ Concrete ❑ Other ❑ Land Cover site

If you selected Closed Forest or Woodland, indicate the ground cover (Select one)**:**
❑ Leaf Litter ❑ Moss ❑ Peat

Atmosphere

List any obstacles (Check one): ❑ No obstacles ❑ Obstacles (describe below)
(Obstacles are trees, buildings, etc. that appear above 14˚ elevation when viewed from the site)

Description:_____

_____

Buildings within 10 meters of instrument shelter (Check one):
❑ No buildings ❑ Buildings (describe below)

Description:_____

_____

Other Site Data:

Steepest Slope: _____ Compass Angle (facing up slope): _____

Rain Gauge Height ☐ cm Ozone Clip Height ☐ cm Thermometer Height ☐ cm

****Thermometer Type*** (Check one):
❑ Other, Soil or Air
❑ Liquid-filled, Current Temperature Only
❑ Digital Single-Day Min/Max
❑ Digital Multi-Day Min/Max
❑ Reset Digital Multi-Day Min/Max Thermometer

Note: reset is required before data collection and entry, when batteries are changed or every 6 months

*** Required Field**

School Name: _____Study Site: _____ Date: _____

Date: Year____ Month____ Day___ Universal Time (hour:min): _____

Was this reset due to a battery change? ❑ Yes ❑ No

❑ Earth Networks Station (Automated Station ID _____)
❑ Davis Instrument (Davis Thermometer Type _____)
❑ Data Logger (HOBO)
❑ Rainwise
❑ WeatherHawk
❑ No Thermometer

Surface Cover Description under instrument shelter (Check one): ❑ Pavement
❑ Bare ground ❑ Short grass (< 10 cm) ❑ Long grass (> 10 cm) ❑ Sand
❑ Roof (describe below) ❑ Other (describe below)

Description:_____

Overall comments on the site (metadata): _____
_____

Surface Temperature

Homogeneous site size (Select one): ❑ 90m x 90m ❑ 30m x 30m
❑ Smaller than 30 x 30m (specify size: __ m x __ m)

Type of IRT Instrument: ❑ Raytech ST20 ❑ Other (specify instrument manufacturer and model) _____)

Overall comments on the site (metadata): _____
_____

Hydrosphere

***Name of Body of Water:** _____ (the name commonly used on maps; if the body of water does not have a common name, provide a description of the water body it comes from or flows into or both.)

***Water Body Type** (Select one): ❑ Unknown ❑ Saltwater ❑ Freshwater ❑ Brackish

Water Body Source (Select one):

❑ Pond (Area of standing water ___ km^2; Average Depth of Standing Water ___ m)
❑ Lake (Area of standing water ___ km^2; Average Depth of Standing Water ___ m)
❑ Reservoir (Area of standing water ___ km^2; Average Depth of Standing Water ___ m)
❑ Bay (Area of standing water ___ km^2; Average Depth of Standing Water ___ m)
❑ Ditch (Area of standing water ___ km^2; Average Depth of Standing Water ___ m)
❑ Ocean
❑ Estuary (Area of standing water ___ km^2; Average Depth of Standing Water ___ m)
❑ Stream (Width of Moving water ___ m)
❑ River (Width of Moving water ___ m)
❑ Marsh/Swamp
❑ Agriculture

*** Required Field**

School Name: _____Study Site: _____ Date: _____

❑ Puddles, animal and vehicle tracks

❑ Other (Width of Moving water ___ m; Area of standing water ___ km^2;
Average Depth of Standing Water __ m)

Water Sample Location: ❑ Outlet ❑ Bank ❑ Bridge ❑ Boat ❑ Inlet ❑ Pier

Can you see the bottom? ❑ Yes ❑ No

Channel/Bank Material: ❑ Soil ❑ Rock ❑ Concrete ❑ Vegetated Bank

Bedrock: ❑ Granite ❑ Limestone ❑ Volcanics ❑ Mixed Sediments ❑ Unknown

Freshwater Habitats Present: ❑ Rocky Substrate ❑ Vegetated Banks ❑ Mud Substrate
❑ Sand Substrate ❑ Submersed Vegetation ❑ Logs

Saltwater Habitats Present: ❑ Rocky Shore ❑ Sandy Shore ❑ Mud Flats/Estuary

Overall comments on the site (metadata): _____
_____

Biosphere

Land Cover

MUC Description: Level 1: _____ Level 2: _____
Level 3: _____ Level 4: _____

***MUC Code:** _____ **Note:** *Use the MUC Guide to determine the greatest level possible within the MUC system*

Overall comments on the site (metadata): _____
_____

Greening

Are there multiple dominant species? ❑ Yes ❑ No

Primary Plant

Is this plant in the understory? ❑ Yes ❑ No

Vegetation Type (Select one): ❑ Grass Genus: _____
❑ Tree Genus: _____ Species: _____
❑ Shrub Genus: _____ Species: _____

Label: _____

Secondary Plant

Is this plant in the understory? ❑ Yes ❑ No

Vegetation Type (Select one): ❑ Grass Genus: _____
❑ Tree Genus: _____ Species: _____
❑ Shrub Genus: _____ Species: _____

Label: _____

Tertiary Plant

Is this plant in the understory? ❑ Yes ❑ No

*** Required Field**

School Name: _____ Study Site: _____ Date: _____

Vegetation Type (Select one): ❑ Grass Genus: _____
❑ Tree Genus: _____ Species: _____
❑ Shrub Genus: _____ Species: _____

Label: _____

If additional plants will be monitored record the information on another sheet or in your Science Log.

Overall comments on the site (metadata): _____
_____

Phenological Gardens

Soil Texture (Select one): ❑ Unknown ❑ Sandy Clay ❑ Sandy Clay Loam ❑ Sandy Loam ❑ Silty Clay ❑ Silty Clay Loam ❑ Silt Loam ❑ Loamy Sand ❑ Sand ❑ Silt ❑ Clay ❑ Clay Loam ❑ Loam ❑ Organic

Soil pH: _____; **pH Method**: ❑ pH Maper ❑ pH Meter

Shrub Name	Date Planted
Witch Hazel 'Jelena'	
Witch Hazel 'Genuine'	
Lilac	
Mock-Orange	

Shrub Name	Date Planted
Forsythia	
Heather 'Allegro'	
Heather 'Long White'	
Snowdrops	

Cloned and Common Lilac

Lilac Shrub Name	Cloned or Common	Date Planted/Died	Height (cm)

Soil (Pedosphere)

Soil Characteristics

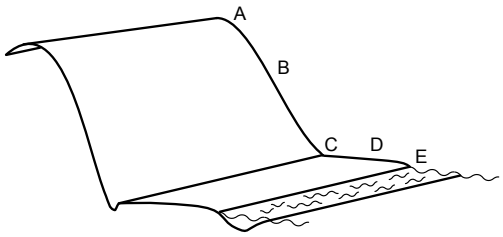
Slope angle (North, Northeast, etc.): _____

Method (select one): ❑ Soil Pit ❑ Auger Hole ❑ Near Surface ❑ Excavation ❑ Road Cut ❑ Erosion Cut

Land Use (Select one): ❑ Urban ❑ Agricultural ❑ Recreation ❑ Wilderness ❑ Other _____

Landscape Position (Select one):

❑ A. Summit
❑ B. Slope
❑ C. Depression
❑ D. Large Flat Area
❑ E. Stream Bank



School Name: _____ Study Site: _____ Date: _____

*** Required Field**

Soil Horizon Definitions

Horizon Number	**Date** (YYYY, MM, DD)	***Top Depth** (cm)	***Bottom Depth** (cm)	**Moisture Estimate** (Select one: Unknown, Dry, Moist, Wet)	**Structure Estimate** (Select one: Unknown, Granular, Blocky, Platy, Prismatic, Columnar, Single Grained, Massive)	**Main color** (code from soil color book)	**Secondary Color** (code from soil color book)	**Consistence Estimate** (Select one: Extremely Firm, Firm, Friable, Loose, Unknown)	**Texture Field Estimate** (Select one: Unknown, Sandy Clay, Sandy Clay Loam, Sandy Loam, Silty Clay, Silty Clay Loam, Silt Loam, Loamy Sand, Sand, Silt, Clay, Clay Loam, Loam, Organic)	**Root Quantity Estimate** (Select one: Unknown, None, Few, Many)	**Rock Quantity Estimate** (Select one: Unknown, None, Few, Many)	**Carbonates** (Select one: Unknown, None, Slight, Strong)

Note: The Top Depth of any horizon must be the same depth or lower than the Bottom Depth of the horizon above it; it cannot be higher that the bottom depth above it.

Comments on the site (metadata): _____ _____

*** Required Field**

School Name: _____Study Site: _____ Date: _____

Parent Material (Select one): ❑ Bedrock ❑ Organic Material ❑ Construction Material ❑ Marine Deposits ❑ Lake Deposits ❑ Stream Deposits (Alluvium) ❑ Wind Deposits (Loess) ❑ Glacial Deposits (Glacial Till) ❑ Volcanic Deposits ❑ Loose Materials on Slope (Colluvium) ❑ Don't Know ❑ Other _____

Distance from Major Features: _____

Soil Moisture and Temperature

Surface State (Select one): ❑ Natural ❑ Plowed ❑ Graded ❑ Backfill ❑ Compacted ❑ Other _____

Canopy Cover (Select one): ❑ Open ❑ Some Trees (within 30m) ❑ Canopy Overhead

Overall comments on the site (metadata): _____

_____

Frost Tube:

We recommend you also complete the atmosphere and surface temperature sections.

Date installed: _____

Height above ground (cm): _____ Depth below ground (cm): _____ Total length (cm): ____

Water body within 100m of site: ❑ No ❑Yes (complete below)

Water body type (Select one): ❑ Unknown ❑ Saltwater ❑ Freshwater ❑ Brackish

Direction to closest point of water: ❑ N ❑ NE ❑ E ❑ SE ❑ S ❑ SW ❑ W ❑ NW

Landscape Position (Choose one, see above in **Soil Characteristics**)

Overall comments on the site (metadata): _____

_____

Site Photos

(record the appropriate photo number for easy identification during data entry)

North	South	East	West
Photo number _____	Photo number _____	Photo number _____	Photo number _____

Overall comments on the site (metadata): _____

_____