

## Site Description Data Sheet

Date:	Time:
Team/Investigators:	Study Site Name:
Site Aspect: (measured with compass)	Slope: (measured with clinometers)
Elevation: _____ <div style="text-align: center;">(meters or feet) circle one</div>	Land Ownership:
Location in Landscape: (circle or describe) <input type="checkbox"/> Top of Watershed <input type="checkbox"/> Mid-slope <input type="checkbox"/> Lower slope <input type="checkbox"/> Flood Plain/Riparian	GPS Location: Coordinates (lat/long or UTM): _____ Datum: _____
Precipitation: Long-term _____  Current Year's _____	Watershed : Name _____  Number _____
Describe Soil: (Soil Texture, Soil Color, Evidence of Soil Erosion or Disturbance)	
Soil Type: (From Web Soil Survey)	
Overstory Plants:	
Understory Plants:	
Evidence of Animal Use:	
Evidence of Human Use:	
Other Unique Identifying Characteristics:	

- **Complete the following in the field**

**GPS Location:** If your class has a GPS unit, record the **latitude and longitude** of the study site. This information can also be obtained on [www.earthtools.org](http://www.earthtools.org) (go to tools → location).

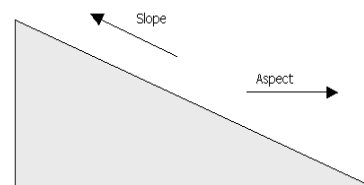
Remember to make sure that your GPS unit is set to measure in latitude and longitude. For example, your GPS can be set to display locations in UTM coordinates instead of latitude and longitude. The **UTM** (Universal Transverse Mercator) coordinates differ from latitude and longitude because they display the easting and a northing coordinates in meters. The easting is the projected distance from the earth's central meridian, while the northing is the projected distance from the equator. You should also record what **datum** your GPS unit is set to. The datum references what projection model you are basing your location measurements from. Common datums are NAD27 and NAD83.



**Elevation:** Use the GPS unit to detect the elevation. If you do not have a GPS, this information can be found on a topographic map (maps are available through the Idaho Geological Survey or at <http://maps.insideidaho.org/WebMapping/DRG>) or use [www.earthtools.org](http://www.earthtools.org) and click tools → height.

**Photos:** Record the photo numbers of pictures you've taken (on the camera), so you can easily separate and label your pictures later. Holding the camera about 1 meter high, take at least one picture from the beginning looking toward the end of the transect, and from the end looking toward the beginning of the transect. Use the photo label on the back of the clinometer to record the site information; Ask someone to hold this card in the lower corner of your transect pictures. Make sure the card is close enough to the camera to be legible!

**Slope:** Locate the area that is at the highest point to determine the slope of the site. Get down close to the ground and put the 90° side of the clinometer towards your face. Look through the straw towards whichever direction is uphill. Through the straw, find the highest uphill point on the site. Trap the dangling washer against the clinometer, read the slope (in degrees), and circle the appropriate slope category on the survey sheet. If you are using a clinometer other than the one provided, it may read the slope in degrees and percent. Percent slope measures the rise over run, or tangent, of the slope angle in degrees. The conversion equation for this is: % Slope =  $\tan(^{\circ}\text{Slope}) \times 100$ .



**Aspect:** Aspect is *opposite* from the direction the slope is pointing (which is the direction you faced when you measured the slope). For example, if you look straight North when you measure the slope, by turning 180 degrees, you should now face straight South, which is the aspect of that slope.

**Soil Texture:** Use the “Feel Method to Determine Soil Texture” handout (included) to determine the texture of the soil on the site.

**Location Description:** Describe the study site as if you were telling someone how to get there. If you need to make reference to distances (i.e. follow Sand Hollow road \_\_\_ miles and walk \_\_\_ feet northwest), find your location on [www.earthtools.org](http://www.earthtools.org) and click tools → distance.

**Evidence of Use:**

**Belt transect:** A belt transect is a 1 meter wide swath and a specified length, in this case 30 meters. Belt transects are used to inspect relatively small areas for various characteristics. You are inspecting the belt transect for evidence of use by animals or humans.



Evidence of Animal Use: **Animal use** includes tracks, droppings, hair, bone, skin, trails, or plants that have been grazed or bitten. You should also record any animals seen or heard at the site.

Evidence of Human Use: **Human use** includes things like roads, fences, houses, trails, areas where soil or vegetation has been moved by heavy equipment, campfire rings, water developments, agricultural fields, etc. Human uses can be hard to see if they occurred a long time ago (like old logging landings or homestead sites). Remember that nature almost never makes perfectly straight lines, angles, or curves.

- **Return to the classroom and complete the following:**

Team/Investigators/Study Site/Date: Record the team name or number, students on the team, the name of the study site (ie. Sandra Jones' west pasture), and the date the data are collected.

Watershed: Locate the study site on the "Surf Your Watershed" site at <http://cfpub.epa.gov/surf/locate/index.cfm>. Record the name and the number of the watershed your site was located.

Soils: Locate your study site on the "Web Soil Survey" website at <http://websoilsurvey.nrcs.usda.gov>. Instructions for locating the soil information on the web soil survey website can be found at [www.cnr.uidaho.edu/what-is-range/curriculum](http://www.cnr.uidaho.edu/what-is-range/curriculum).

Precipitation: The **long-term average** precipitation is useful to determine vegetation zones and limitations of plant productivity. The **current year's precipitation** is the amount of precipitation received since Jan. 1 of this year. It is an important factor in site productivity, especially current year forage availability and wildfire risks. Both long term averages and current year's precipitation can be found at <http://www.wrcc.dri.edu/summary/climsmid.html> for various locations around Idaho.

Land Ownership: If you are on someone's private property, record their name (or the person who takes care of the property). For land ownership information (i.e. private, state, tribal, Bureau of Land Management, Forest Service, etc), visit the Idaho Fish and Game website at <http://fishandgame.idaho.gov/ifwis/huntplanner/mapcenter.aspx>. On the **LAYERS** tab, SELECT "town & places", "highways & roads", "rivers & streams", "land ownership", and "USGS topography" by checking the boxes next to the layer names. Then use the interactive map tools to navigate to your site location. Once you have closely pinpointed the site location, click on the **LEGEND** tab to display the land ownership information and record the information on your worksheet.

Study Site\_\_\_\_\_

Direction of Photo:\_\_\_\_\_°

Date\_\_\_\_\_

Investigators\_\_\_\_\_

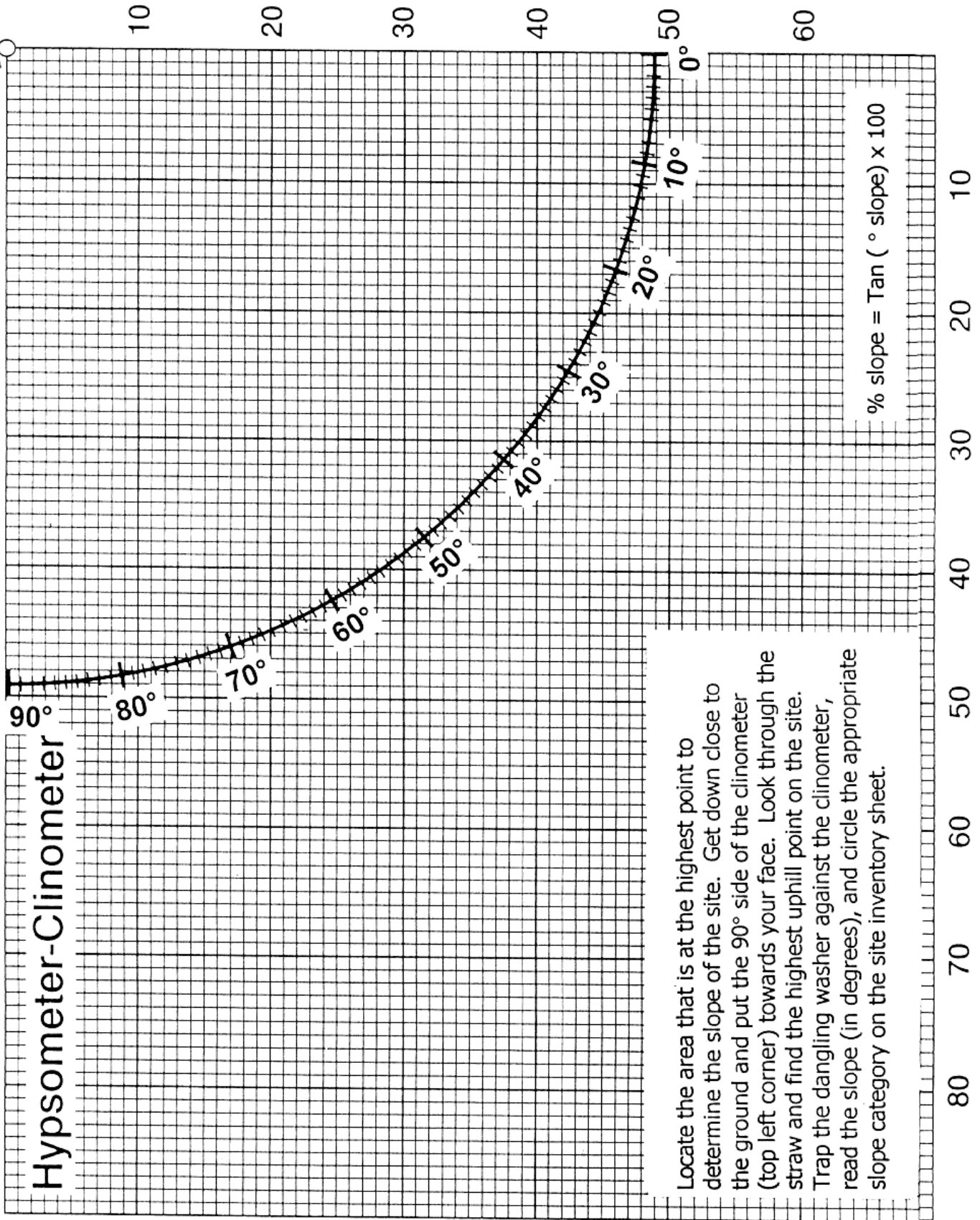
\_\_\_\_\_

Look through straw here

Tape straw here

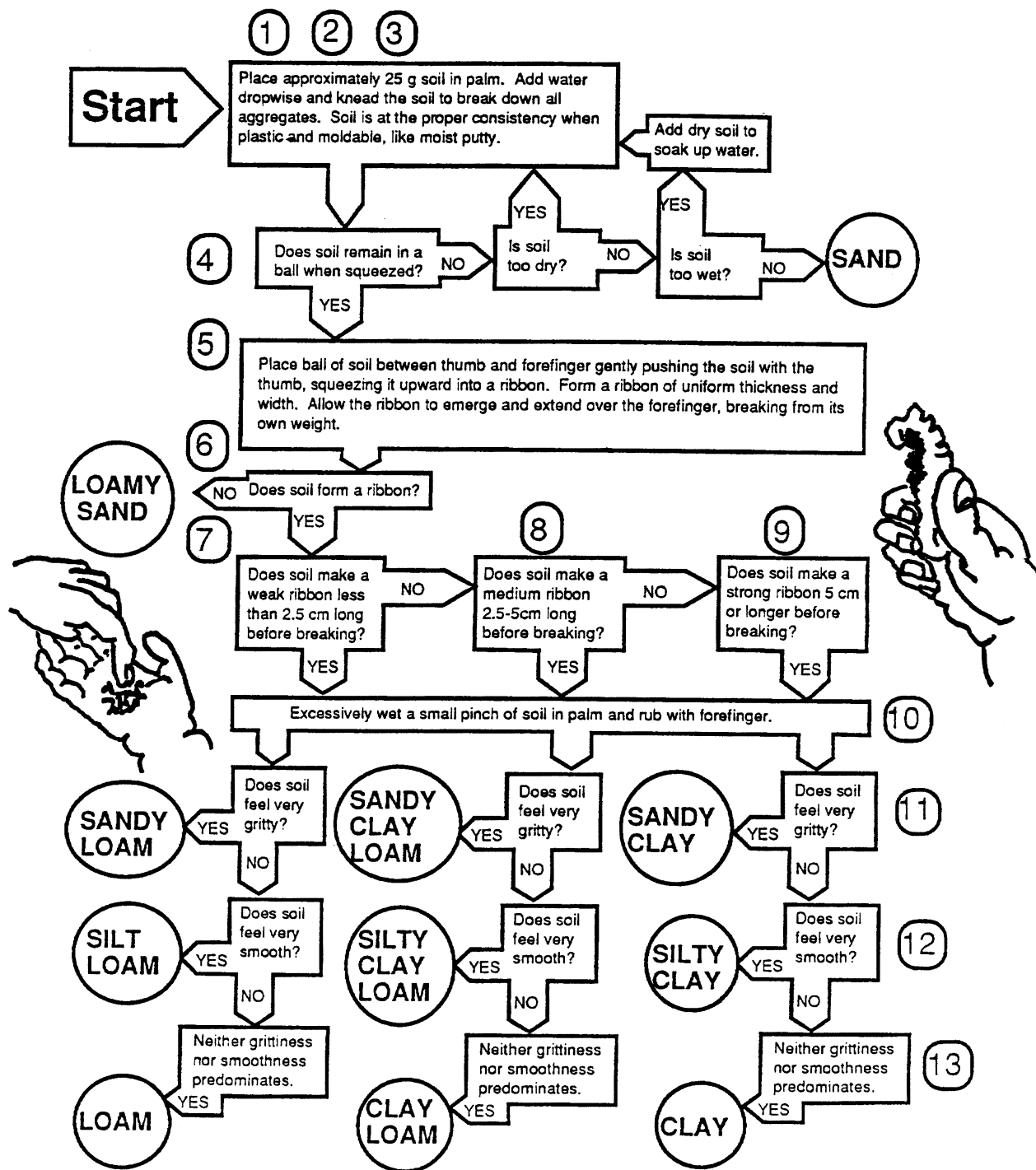
Put knotted string through here

# Hypsometer-Clinometer



Locate the area that is at the highest point to determine the slope of the site. Get down close to the ground and put the 90° side of the clinometer (top left corner) towards your face. Look through the straw and find the highest uphill point on the site. Trap the dangling washer against the clinometer, read the slope (in degrees), and circle the appropriate slope category on the site inventory sheet.

## THIEN: SOIL TEXTURE-BY-FEEL ANALYSIS



**Fig. 12. Flow chart for determining soil texture by feel.** Adapted from Thien, S. J., 1979, "A Flow Diagram for Teaching Texture-by-Feel Analysis," *Journal of Agronomic Education*, Vol. 8:54-55 by permission of the American Society of Agronomy.