

Student Name: \_\_\_\_\_

Group # \_\_\_\_\_

Date: \_\_\_\_\_

Group Members: \_\_\_\_\_

Site Location: \_\_\_\_\_

**PROFILE DESCRIPTION**

**ORGANIC HORIZONS**

Horizon	Depth (cm)	pH	Roots: Quantity, shape, size; give fine root %	Description: materials (dead) other than roots	Colour smear
pp 5-6		H <sub>2</sub> O CaCl <sub>2</sub>	pp 34-36		
		/			
		/			
		/			

**MINERAL HORIZONS**

Horizon	Depth (cm)	pH	Texture	Structure Distinctness, size, shape	Consistence	Roots Quantity, shape, size, Give fine root %	Boundary Distinctness, topography	Coarse Fragments size and %	Mottles (if present) Abundance, contrast, size	Colour Smear
pp 8-16		H <sub>2</sub> O CaCl <sub>2</sub>	pp 23-28 T 91	pp 29-32 T 100	pp 32-34 T 117	pp 34-36	p 36	pp 37-39	pp 21-22 T 162	
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		/								
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		/								
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Identify horizons that have rooting restrictions and specify the type(s) of restrictions:

Forest Floor Classification: pp 6-8

Soil Classification: pp 98-115

Stoniness: p 42  
 Rock Outcrop: pp 42-43  
 Microtopography: pp 43-44

Slope Position: p 41  
 Slope Percent:  
 Aspect:  
 Drainage Class: pp 46-51

Landform Type:

Bedrock Geology:

**On-Site Vegetation:** Based on what you observed within the general vicinity (approx. 50m<sup>2</sup> of your soil pit location, identify the dominant overstory species, mid / lower canopy, and ground vegetation species present. Provide both the common and scientific names, as well as their relative abundance at your site (“L” – Low Abundance, “M” – Moderate Abundance, and “H” – High Abundance).

Provide a complete, comprehensive list.

Dominant Overstory Species:

Mid / Lower Canopy Species:

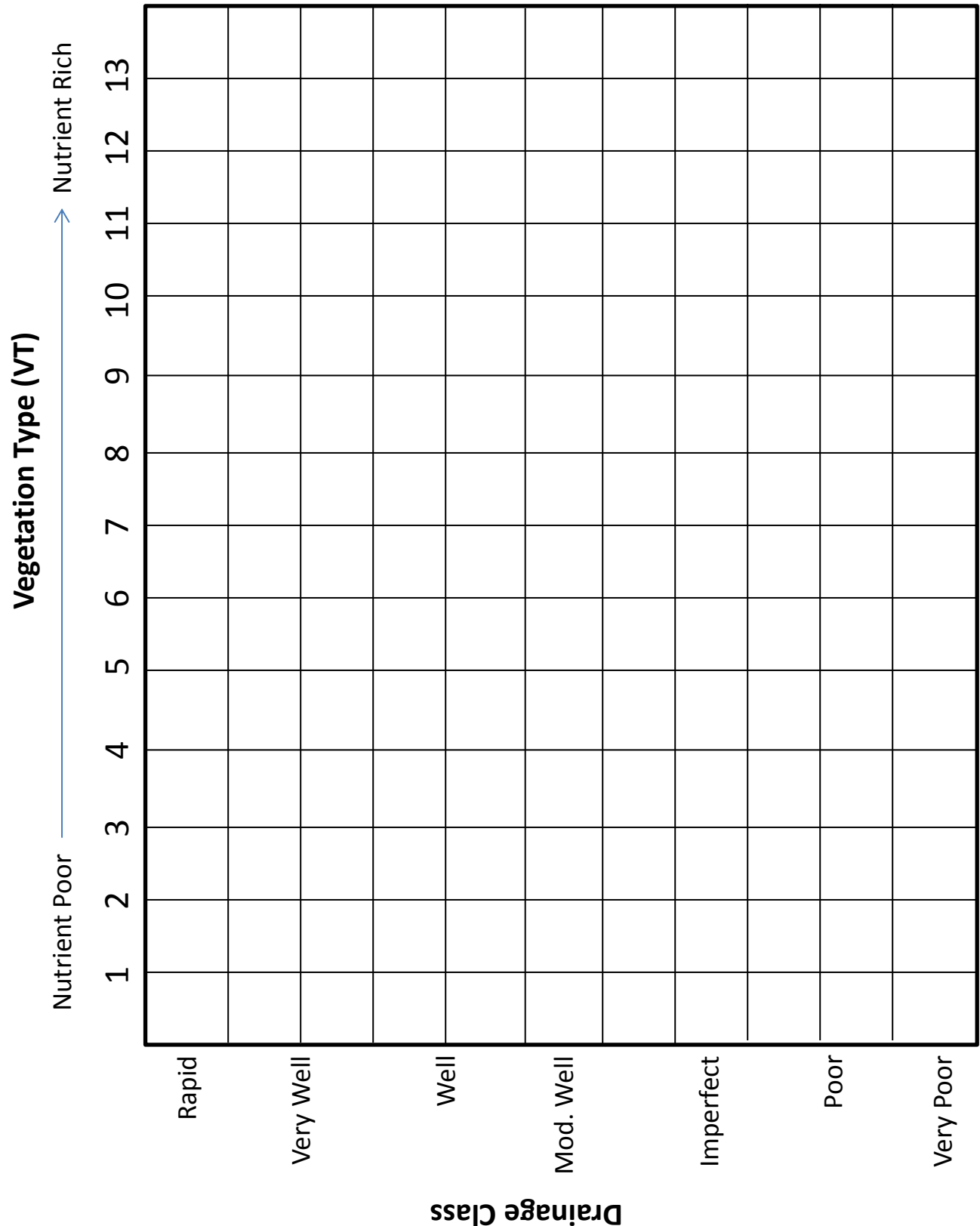
Ground Vegetation Species:

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**Suggest reasons as to why these particular vegetation species grow at this site:** general soil conditions (drainage class, nutrient availability, microclimate, soil density, texture, coarse fragment content, soil acidity, minerology, soil rooting depth...etc.). Possibly relate to site class assessment, ecoregion / ecozone, and / or forest type conditions, and site suitability / adaptation.

**Site Classification:** Using site classification reference materials, your soil description, complete vegetation list, determine the vegetation type (VT) and soil type (ST) at the site visited. On the edaphic grid below, plot points for the transect soil pits based on VT and drainage class. Create a colour shaded polygon, and compile the polygons for all sites visited from week-to-week.

VT # \_\_\_\_\_ Name: \_\_\_\_\_ ST # \_\_\_\_\_ Name: \_\_\_\_\_



**SOIL FORMATION** . Discuss the influences of parent material , topography , climate , vegetation , and people (if applicable) ) on soil formation at this site (i.e. WHY did this particular horizon and horizon sequence develop here). Refer to your Field Manual, your Course Textbook, and Class Notes (be sure to cite relevant pages).

Description of Soil Parent Material:

**Mode Of Deposition:**

**Predominant Rock Type(s):**

Pedogenesis - Description of soil formation and the soil forming processes leading to horizon development.

LFH Horizons:

**Roots (Size & Overall %)**

A Horizon(s):

B Horizon(s):

C Horizon(s):

**SOIL AS A ROOTING MEDIUM:** Discuss the positive and negative aspects of this soil and site as a medium for rooting and plant growth. Refer to your Field Manual, your Course Textbook, and Class Notes (be sure to cite relevant pages). Things to consider (e.g., soil mechanical strength, erodibility, access to nutrients, layers restricting growth , wetness, coolness, amount of litter input, litter turn-over rates, etc.

**(+) Aspects**

**(-) Aspects**

LFH Horizons:

A Horizon(s):

B Horizon(s):

C Horizon(s):

Overall Appraisal:

Sketch the soil and soil parent material continuum at the site, as part of the landscape position of the soil, and the factors that contribute to soil variability (soil variations) at the site. The drawing can be 2 dimensional or 3 dimensional. Colours should match soil colors and soil substrate colors closely. Eccentuate differences that appear to be important. Landscape position refers to topography, surrounding vegetation type, underlying bedrock and landform.

## Soil Profile Sketches.

Draw a detailed sketch of your soil profile (including root distribution, coarse fragments, mottles, colours, boundaries, variabilities...etc.), and draw the corresponding CanSIS rep. profile (for your order) as found from:

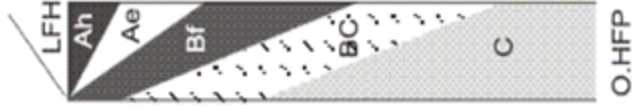
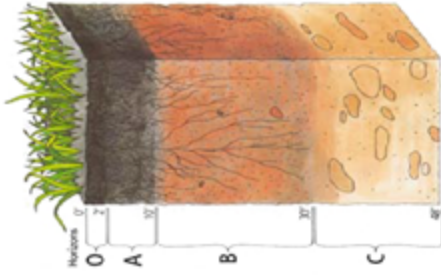
<http://sis.agr.gc.ca/cansis/taxa/cssc3/chpt03.html>

\*Draw to relative scale & label all items.

Site #: \_\_\_\_\_

Location: \_\_\_\_\_

For Example (not complete):



Field Sketch

Profile	Labels

CanSIS Sketch

Profile

Scale = 1 : \_\_\_\_\_