Soil Moisture Protocol Test

Date Performance Is measured / Level of Performance (see below) Student activity & Level of Performance **+** appropriate student performance **-** inappropriate student performance **n.a.** not appropriate or not observed	Student name																						
Preparation of site and sample collection																							
label collection cans with unique ID numbers																							
record site location and description																							
locate sampling point; record surface cover type																							
remove litter / living plant material																							
dig hole 10 cm diameter x 5 cm deep																							
remove rocks, pebbles, worms, grubs etc.																							
add ~ 100 grams of soil to collection can (3/4 full)																							
record date, time, depth, can number on data sheet																							
seal container; store away from heat / sunlight																							
remove additional soil down to desired depth																							
record new depth																							
remove rocks, pebbles, worms, grubs etc.																							
add ~ 100 grams of soil to collection can (3/4 full)																							
record date, time, depth, can number on data sheet																							
return all remaining soil to hole																							
seal container; store away from heat / sunlight																							
record soil temperature at same depths as samples taken within 25 cm of sample site																							

Soil Moisture Protocol Test
(continued)

Date Performance Is measured / Level of Performance (see below) Student activity & Level of Performance + appropriate student performance - inappropriate student performance **n.a.** not appropriate or not observed	Student name																						
Weigh and dry the samples																							
preheat oven (drying oven…. 95° to 105°C) (dehydrating oven….75° to 95°C) (microwave….CAUTION: use microwave safe container)																							
calibrate balance (if necessary)																							
remove cover; weigh soil sample; record as net weight																							
dry uncovered sample (drying oven….10 hours) (dehydrating oven….24 hours) (microwave oven….high power for 5 min. intervals until consecutive weights vary <0.25 g)																							
remove sample with hot pad / oven mitts; cool 5 minutes																							
weigh soil sample; record as dry weight																							
record drying time, type oven used																							
remove all soil from can; wipe can; weigh can; record																							
Calculate soil water content																							
(net weight) - (weight of can) = net soil weight																							
(dry weight) - (weight of can) = dry soil weight																							
(net soil weight) - (dry soil weight) = water weight																							
(water weight) ÷ (dry soil weight) = soil water content																							
record soil water content on data sheet																							
repeat for each soil sample																							