Student Name_____ Assignment_____ Date_____

Assessment Rubric for Open Ended Science Questions Total # of points 16 Student Score _____

Points	**4**	**3**	**2**	**1**
Ideas	Several (4-5) thoughtful ideas included. Ideas are clear and supported with details.	Some (3-4) thoughtful ideas included. Ideas are clear and supported with at least one detail.	Two ideas included. Ideas are clear but not supported with detail.	One idea included. Idea is unclear and not supported with detail.
Organization	Topic sentence restates the question. Ideas are well organized. Concluding sentence gives a summary of ideas.	Topic sentence restates the question. Ideas are somewhat organized. Includes a concluding sentence.	Topic sentence restates the question. Ideas are somewhat organized. No concluding sentence.	No topic sentence. Ideas are not organized. No concluding sentence.
Word Choice	Includes at least four science vocabulary words that are used appropriately.	Includes at least three science vocabulary words that are used appropriately.	Includes at least two science vocabulary words that are used appropriately.	Includes one science vocabulary words that is used appropriately.
Conventions	All sentences include proper punctuation and capitalization. Correct grammar is used- subject and verb agreement; no fragments or run on sentences. 0-1 spelling errors.	Sentences include most proper punctuation and capitalization. Most correct grammar is used- subject and verb agreement; no fragments or run on sentences. A few spelling errors.	Sentences include some proper punctuation and capitalization. Some correct grammar is used- subject and verb agreement; contains fragments or run on sentences. Spelling errors.	Sentences include little proper punctuation and capitalization. Many grammatical errors in subject and verb agreement; contains fragments or run on sentences. Many spelling errors.

Name_____ Group #_____ Date_____

Field Work Assessment Rubric

	Always 3	**Sometimes 2**	**Needs Improvement 1**	**Points**
I showed respect for **all** living things in and around the area of fieldwork				
I stayed with my group at all times, displayed good teamwork, and settled disagreements peacefully				
I completed my assignment and my data sheet is neat, complete, and accurate				
I used materials and the field site safely and responsibly.				

Total Points_____

Student Comments

_____

_____

_____

Teacher Comments

_____

_____

Name_____ Date_____

Measuring Snow Depths

Your group will be measuring the depth of the snow in **centimeters** at four locations in your **hemlock** plot, then at four locations in your **hardwood** plot. You will find the average (**mean**) for each plot.

Hemlock					Average

_____

_____ 4)

_____

+_____

Hardwood					Average

_____

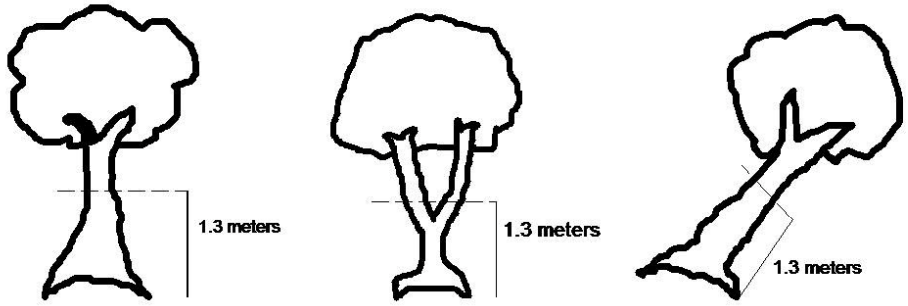
_____ 4)

_____

+_____

Name_____ **Date**_____

Measuring Tree DBH (Diameter at Breast Height)
Scientists measure the diameter of trees at **1.3 meters** ~ the breast height of the average person. They use this to monitor the growth of the tree. Here are some rules for finding the **DBH** of your tree.



- First you have to find the circumference ~ the distance around the trunk.
- Make sure you keep your measuring tape level as you go around the tree!
- If your tree splits under 1.3 meters measure each side seperately.
- If your tree is leaning measure your 1.3 meters against the tree.

Now you are ready to measure!

Use your tape to measure the circumference of your tree. Remember scientists use centimeters!

Now use the circumference to find the diameter ~

Diameter = Circumference ÷ 3.14 (pi)

The DBH of my tree is _____ centimeters.

Group names _____ **Date** _____

Hemlock Plot ~ plants **(small plants, grasses, moss, ferns)**

How Many?	Name of plant	Description
	moss cover	**0** none **3** 50-75% **1** 1-25% **4** 75-100% **2** 25-50%

Total # _____ **# of Species**_____

Hemlock Plot ~ shrubs (with woody stems)

How Many?	Name of shrub	Description

Total # _____ **# of Species**_____

Hemlock Plot~ Fungi **(mushrooms and other fungi)**

How Many?	Name of fungus	Description

Total # _____ **# of Species**_____

Hemlock Plot ~ Seedlings and Saplings

How Many?	Name	Description

Total # _____ **# of Species**_____

Hardwood Plot ~ plants (small plants, grasses, mosses, ferns)

How Many?	Name of plant	Description
	moss cover	**0** none **3** 50-75% **1** 1-25% **4** 75-100% **2** 25-50%

Total # _____ # of Species_____

Hardwood Plot ~ shrubs (with woody stems)

How Many?	Name of shrub	Description

Total # _____ # of Species_____

Hardwood Plot ~ Fungi (mushrooms and other fungi)

How Many?	Name of	Description

Total # _____ # of Species_____

Hardwood Plot ~ Seedlings and Saplings

How Many?	Name	Description

Total # _____ # of Species_____

Names_____

Hemlock / Hardwood Plot Inventory

Is there a difference between the under story of a hemlock forest and a hardwood forest? Compare the plants and insects in a one meter by one meter plot in each to find out!

First, look at the plants (small plants, ferns, grasses, moss) in the Hemlock plot. Count how many of each kind and list them in the boxes. If you don't know the name of the plant just write the description.

Moss will be counted by the percent of the plot they cover. Put a 0 if there is no moss in your plot, 1 if the plot is covered 1% to 25%, 2 for 25% to 50%, 3 for 50% to 75%, and 4 for 75% to 100% cover.

Do the same for the shrubs (plants with woody stems), the fungi (mushrooms and others), and the small trees ~ the seedlings and saplings.

Now record all the plants in the Hardwood plot in the same way.

You will also be looking at the spiders and insects who live in your plot. You will inventory these using three different methods:

Observation ~ Carefully observe your plot for 10 minutes. Write down any spiders, ants, and beetles you see. Look at them carefully. *If they look different, record them separately*.

Litter sample ~ scoop up several handfuls of forest litter into the box. Shake vigorously for a few minutes. Lift out the top part of the box and record any spiders, ants, and beetles you see.

Pit traps ~ set two pit traps in each plot. Put a little soapy water in the cups. After 48 hours remove the cups. Record any spiders, ants, and beetles you find.

Hemlock Plot

Name **Ant, beetle, spider**	**How Many?**	**Collection Method**	**Description**

Field Notes and Observations~

_____

_____

_____

_____

_____

Hardwood Plot

Name **Ant, beetle, spider**	**How Many?**	**Collection Method**	**Description**