AUP Yard Waste Study Data Sheet

Name _____ Date _____

Hypothesis: Which type of yard waste do you think will change the properties of water (nutrients, pH, clarity, etc.) the most? Why???

_____

_____

_____

_____

_____

_____

Methods:

(1) Using the containers provided collect samples of each yard waste solution, also collect a control sample from the sink.

(1) For each sample AND the control, complete a visual assessment of water clarity. Record these qualitative results in the table below.

(1) For each sample AND the control, measure nitrogen (red strips), phosphate (green strips), and pH (purple strips)

- Dip and swirl test strip in solution for 5 seconds, remove and let sit for 45 seconds.
- Using the color key record your results in the table below.

(4) Complete the run-off pollution analysis.

Qualitative Results:

Water Clarity:

Check the best option for each group

Group	Clear	Opaque	Cloudy
Control			
Dirt			
Leaves/grass			

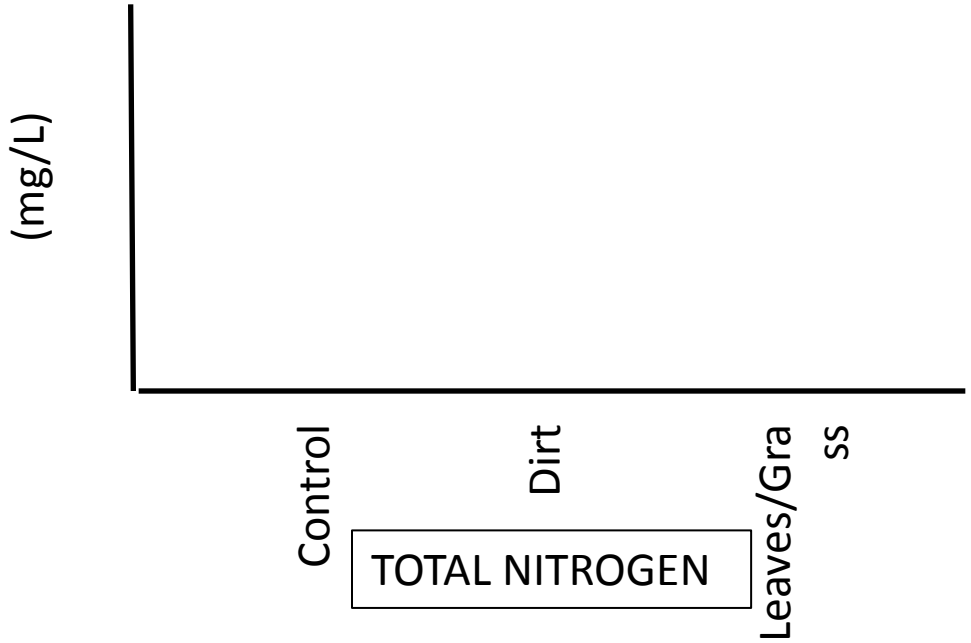
Quantitative Results:

Water Clarity:

Check the best option for each group

Group	Nitrite (mg/L)	Nitrate (mg/L)	Total Nitrogen	Phosphate (mg/L)	pH
Control		+	=		
Dirt		+	=		
Leaves /Grass		+	=		

Newtown Creek has a problem with too much Nitrogen. Use this space to graph your nutrient results. (remember to add a scale on the Y-axis)



QUESTIONS:

(1) According to your data, which type of yard waste contributed the most pollution to the water? Is this what you expected ?_____

_

_____

(2) Why is it important to have a control group? _____

_____

Run-off Pollution Analysis for a 90% Rain Event Over AUP

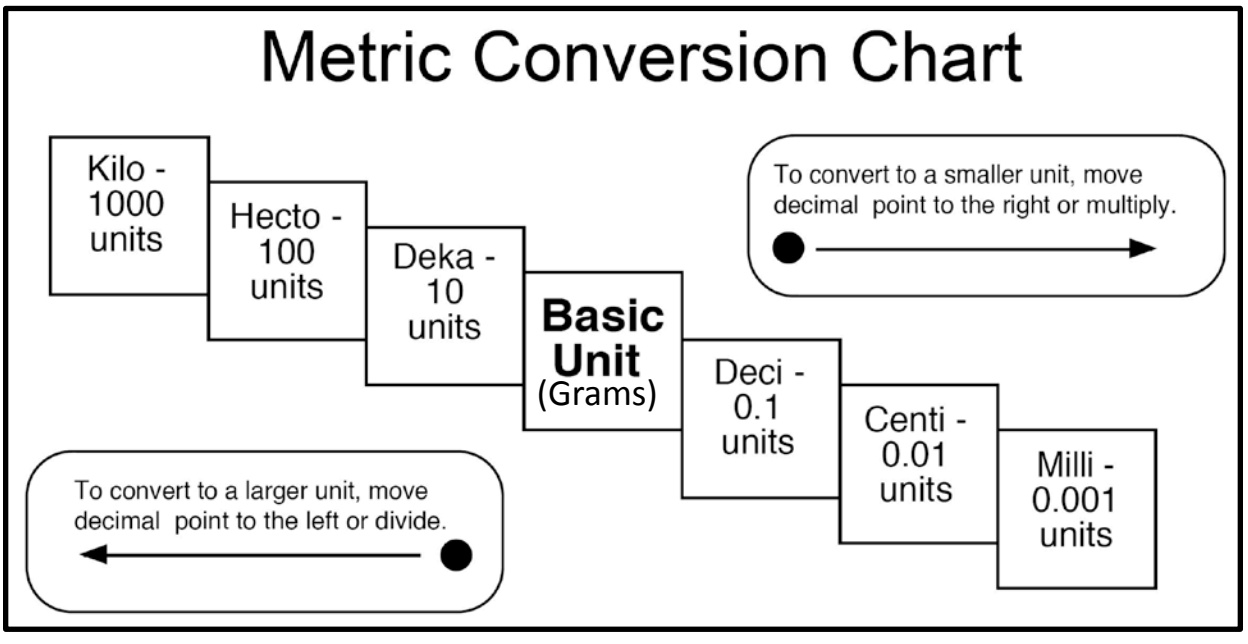
For our most common storm event in NYC we get 1.3 inches (0.033 meters) of rain in 24 hours. From last weeks calculations we know that this adds up to **180,000,000** gallons of run-off from AUP's campus.

We measured Nutrients with the unit mg/L, so we need to convert this run-off amount into Liters. If 1 gallon = 3.78 liters. How many liters of run-of come from AUP's campus?

Now we will figure out how much total Nitrogen is likely to be in the stormwater run-off from AUP. (use the chart below to help you convert units)

Nitrogen Concentration _____mg/L X _____ L of runoff
= _____mg Nitrogen

_____mg Nitrogen = _____ Kg Nitrogen



Conclusions:

The Environmental Protection Agency is trying to reduce the amount of Nitrogen to Newtown Creek, they have set a limit of 20,534 KG of Nitrogen per day to Newtown Creek.

What do you think is AUP's role in helping to meet this Nitrogen limit?

_____
_____
_____
_____
_____
_____
_____