Pollution in Dar

Syllabus Topic 5.2.1

Image source: http://www.tendringdc.gov.uk

Objective

You will investigate one form of pollution in Dar es Salaam, focusing on either water, air, or soil pollution.

Instructions

1. Read the Topic 5 notes available on the website. Pay particular attention to the notes for Topic 5.2 - Detection and Monitoring of Pollution.
2. Propose a question or problem for your investigation. The investigation should focus on one of the primary types of pollution we have studied in class: polluted water, air, or soils. Please note that if you investigate water pollution, *you may not choose the same component of water quality that you selected for the water lab during term 1*.
3. Bring or email your written investigation proposals, including the independent and dependent variables, to class for feedback from Mr K. The due date for this will be posted on the ESS class calendar.
4. You are allowed to check out any of the Vernier probes, soil and water kits, and/or LoggerPro components we have available in the science department. See Mr Kremer and sign the checkout form before requesting anything from the science techs' office. Also, please remember that we have a very limited supply of these expensive probes (only 2 functioning DO meters right now!), so it is of critical importance to your classmates that you use the probes efficiently, take care of them properly, and return them to school as soon as possible.
5. If at any time you are unsure how to use any of the equipment we have available, *please ask your teacher for help*.
6. You will be required to present evidence of ongoing data collection throughout the semester. This evidence will be examined and counted as homework. You should plan to collect samples and/or data at least once each week throughout the semester.
7. Please bring or email your completed data tables to class for feedback and comments from Mr K. The due date for your data tables will be posted on the ESS class calendar.
8. The final write-up is due the last day of class before the December break. It is a full lab assessed under all the criteria: PL, DCP, and DEC.

IA - Pollution Lab

Assessment Criteria

This is a *full lab*, meaning your work will be assessed under the PL, DCP, and DEC criteria described in the student handbook and listed below.

PLANNING (PL): Total Marks _____ out of maximum 6			
Levels/marks	Aspect 1	Aspect 2	Aspect 3
	Defining the problem and selecting variables	**Controlling variables**	**Developing a method for collection of data**
Complete/2	States a focused problem/ research question and identifies the relevant variables.	Designs a method for the effective control of variables.	Describes a method that allows for the collection of sufficient relevant data.
Partial/1	States a problem/research question that is incomplete or identifies only some relevant variables.	Designs a method that makes some attempt to control the variables.	Describes a method that does not allow for the collection of sufficient relevant data.
Not at all/0	Does not state a problem/ research question and does not identify any relevant variables.	Designs a method that does not allow for the control of the variables.	Describes a method that does not allow for the collection of any relevant data.
DATA COLLECTION AND PROCESSING (DCP): Total Marks _____ out of maximum 6			
Levels/marks	Aspect 1	Aspect 2	Aspect 3
	Recording data	**Processing data**	**Presenting processed data**
Complete/2	Systematically records appropriate quantitative and/or qualitative data*, including units.	Processes primary and/or secondary data correctly.	Presents processed data appropriately and effectively to assist analysis.
Partial/1	Records appropriate quantitative and/or qualitative data but with some mistakes and/or omissions.	Processes primary and/or secondary data but with some mistakes and/or omissions.	Presents processed data appropriately but lacks clarity or with some mistakes and/or omissions.
Not at all/0	Data is not recorded or is recorded incomprehensibly.	No processing of data is carried out or major mistakes are made in processing.	Presents processed data inappropriately or incomprehensibly.
DISCUSSION, EVALUATION AND CONCLUSION (DEC): Total Marks _____ out of maximum 6			
Levels/marks	Aspect 1	Aspect 2	Aspect 3
	Discussing and reviewing	**Evaluating procedure(s) and suggesting improvements**	**Concluding**
Complete/2	Discussion is clear and well reasoned, showing a broad understanding of context and the implications of results.	Identifies weaknesses and limitations and suggests realistic improvements.	States a reasonable conclusion, with a correct explanation, based on the data.
Partial/1	Discussion is adequate, showing some understanding of context and implications of results.	Identifies weaknesses and limitations but misses some obvious faults. Suggests only superficial improvements.	States a reasonable conclusion or gives a correct explanation, based on the data.
Not at all/0	Discussion is inadequate, showing little understanding of context and implications of results.	The weaknesses and limitations are irrelevant or missing. Suggests unrealistic improvements.	States an unreasonable conclusion or no conclusion at all.