

## **When problems arise in a practical/in the field**

### **Scenario 1: The practical exercise goes wrong or fails ...**

You are demonstrating in an environmental science second year class. The students have been asked to make total counts of algal cells in polluted canal water.

Three cell counting chambers are set out in the lab, and the students have been provided with some basic instruction (recipe card) on how to use them. The students have been asked to work through their sample using the different chambers to calculate the average cell-counts.

One group have been very slapdash in their approach to the task, trying to get through it as quickly as possible without due care or attention. When you look at their calculations it appears that they have got the wrong results. However, on checking other student groups you see they also have incorrect results. You check the instruction card and realise there has been a mistake in the multiplication factor given for each chamber. The students are becoming unhappy because the experiment has appeared to fail and they say the afternoon has been a waste of their time.

**What are you going to say to the students?**

### **Scenario 2: The distracted student ...**

You are working with a group of first year students on a glaciology field trip to Llyn Llydaw, Snowdonia. Jack is working supposed to be working in his group to identify and then record the orientation of the glacial striae from the exposed rocks. However, he is a rather lonely student and whilst the rest of his group is working through the task, Jack seems more concerned with skimming stones on the lake. You can see the other two students in his group are getting frustrated with him, and it looks like they are doing all the work.

**What are you going to say to Jack to engage him with the task at hand?**

### **Scenario 3: Storm in a teacup ...**

You are demonstrating in a geomorphological techniques practical, where students have to work together in teams for the day to process the data they collected in the field the previous week. You already noticed that there were tensions last week when the data was collected, but today the assumed group leader is bickering with one of the other group members because they think they made an error in recording the data last week.

The group leader is clearly frustrated but the sharp exchanges between the two students is now causing the other two group members to walk away and leave them to argue, so now no progress is being made on the task at hand.

**What can you do to diffuse the situation and get the group back on task?**

#### **Scenario 4: Accidents will happen ....**

You are demonstrating in a soil science practical. The students are preparing their soils samples for acid digestion, and must add hydrochloric acid to their weighed and dried sample. In the process of transferring their open glass beaker, with the acid, to the hot plate when they drop the beaker and it smashes on the floor. Without thinking the student has immediately dropped to the floor to try and pick up the broken glass but in the process has cut their finger, which is now bleeding (albeit slowly).

**What are you going to do?**

#### **Scenario 5: But they told me that's correct ....**

You are demonstrating in a geography data crunching class with a fellow GTA. The students are working on quantifying their error associated with their calculated sea level index points (based on another set of data points). You have just spoken to a pair of students who have got results for their sea level index points that are out by several meters. You realised that they have been calculating their survey data incorrectly, and have then have applied ordnance datum instead of chart datum. Chatting more with the students you realise that your fellow demonstrator has given them the wrong information, at this point another pair of students raise the same problem.

**What should you do?**

**Should you discuss this with your fellow demonstrator?**

#### **Scenario 6: Slow, slow, quick, quick, slow ...**

Peter and Jane are mature students taking the Physical Oceanography module for which you demonstrate all the practical classes. You are running a 3 hour practical, where students need to log a subsurface core (6m long), obtain a sub-sample from a monolith and prepare it for foraminifera analysis (in next week's class), and finally attempt to identify the foraminifera on a pre-prepared slide under the microscope. With 15 minutes before the end of the class and students already leaving you realise that Peter and Jane still haven't logged the core. They have been working slowly as they are anxious to do everything correctly, but have failed to execute their tasks on time. They tell you they don't mind staying late, but you are only paid for 3 hours of teaching and you know they can't work in the lab unsupervised.

**What will you do?**

**What, if anything, should you say to Peter and Jane?**