

## Practical Roles

### Why use them?

By defining the roles more clearly the hope is that jobs will not get missed. Often it may be appropriate to combine jobs—in reality any scientist will perform all of these functions, often single-handedly while standing on one leg and humming “Always Look on the Bright Side of Life.”

### How to make them?

When I produced these badges for my classes I had them copied onto different colours of bright card. Once trimmed, they were holepunched (a standard two hole punch worked well) and a security chain worked well. Wearing the badges seems, especially with younger students, to reinforce the importance of the job. Once this set are worn out I intend to produce a laminated version.

### How to use them?

You may decide to give out the badges very carefully. I would suggest particular stereotypes may benefit:

The over-excited, often bright but sloppy boy (bad hand-writing and great ideas), never lets anyone else run the practical: **Scribe**

The quiet girls who are managing fine and whose notes are often perfectly presented, (because they stay as far away from the practicals as possible): **Equipment Set-Up** or **Observer**

The attention-deficient student with a slight tendency to act the fool whenever possible, and who needs to proofread their work more carefully: **Quality Control**

As a side benefit, I noticed that by giving the same role to students who would normally work together (and possibly avoid any work at all in the process) I could force them to work in separate groups *without making a point of it*.

### If you use them...

As ever, I would really love to receive feedback and suggestions. Simply knowing that colleagues are finding these ideas helpful would be very much appreciated. You can contact me through my blog, [Teaching Science](#), where there are many more ideas and resources.

### **Equipment Set-Up**

Your job is to collect the co-ordinate the collection of equipment and then set it up. Think about safety – do the group need to tie back hair and/or wear safety goggles? Do you need to be near a gas tap or a sink?

*Tell the **Observer** how to control the independent variable and collect the data. Check with **Quality Control** that data will be accurate and precise and that you have taken all control variables into account. Ensure the **Scribe** has somewhere to work.*

### **Observer**

Your job is to take the readings as the experiment continues. You will need to change the independent variable and read out the data collected. Are you ready to use the correct units?

*Pass data to the **Scribe**, who will record it. Pass on any apparatus problems to **Equipment Set-Up**. Identify anomalies if present and discuss with **Quality Control**.*

### **Scribe**

You will record the data in an appropriate table, making sure both quantities and units are included. You may need to calculate mean averages.

***Equipment Set-Up** should be able to tell you the range of the independent variable. Listen closely to the **Observer** who will provide the data. If there are anomalies, point them out to **Quality Control** before including in the average – the **Observer** may need to repeat them.*

### **Quality Control**

Your job is to make sure that the readings collected are accurate and precise. Check that the method is fair and that control variables are not altered.

*Work with **Equipment Set-Up** to ensure good data can be collected. Keep track of readings and ask **Observer** to repeat if you can show a mistake was made. Make the **Scribe** aware of any problems with data collected.*

# Equipment Set-Up

prepare apparatus, check safety

# Observer

take readings, including units

# Scribe

record data, calculate averages

# Quality Control

fair, accurate, reliable, precise

# Quality Control

fair, accurate, reliable, precise