



Laboratory Demonstrator's Handbook

**Centre for Innovation in Learning
& Teaching
2017**

TABLE OF CONTENTS

INTRODUCTION	1
GETTING STARTED	2
PREPARING FOR TEACHING	2
<i>Your personal teaching approach</i>	2
<i>Aims of Laboratory Work and Field Trips</i>	3
<i>Initial meetings with your supervisor</i>	3
Suggested questions	4
<i>Planning to Teach</i>	5
Planning a Pre- Laboratory Talk	6
<i>Rehearsal</i>	7
TEACHING STRATEGIES	7
<i>Laboratory sessions</i>	7
<i>Small Groups or Tutorials</i>	8
<i>General teaching strategies</i>	10
Providing assistance.....	10
Questioning	10
Written instructions	11
Teaching aids and equipment.....	12
ASSESSMENT	13
<i>Academic integrity</i>	13
How to notice plagiarism.....	14
Avoiding plagiarism.....	14
Taking action	14
<i>Informal classroom assessment strategies</i>	14
<i>Feedback</i>	15
Suggested feedback mechanisms	15
SUPPORTING FIRST YEAR STUDENTS	16
HEALTH AND SAFETY ISSUES	17
TROUBLE SHOOTING	18
EVALUATING YOUR TEACHING	19
<i>Student Evaluation of Teaching (SETs)</i>	19
<i>Informal Review</i>	20
IN CLOSING	20
FURTHER READINGS	20
APPENDIX 1	21

INTRODUCTION

Welcome to demonstrating at Flinders University! This booklet has been designed to assist you during your time as a sessionally employed demonstrator at Flinders University. Demonstrators are mainly concerned with teaching in a practical, laboratory environment which may include a wet-lab, computer laboratory, or field trip. However, as demonstrators often also conduct small-group teaching activities and undertake marking, this booklet also includes information on tutoring and assessment.

Reflect on what *you* think makes a good demonstrator and tutor. Think back to teachers you have had during the course of your own studies and draw on some of the skills they used to help you learn. Here are some of the characteristics that have been identified as making an effective teacher:

- approachable to students
- shows good knowledge of the theory, as well as techniques and skills
- gives clear explanations of what is expected of students
- sets a good example for students in their preparation for the session and their behaviour in the laboratory
- is able to link the material presented in the class with theory presented in lectures
- gives clear explanations, when asked
- marks without bias towards individuals and is consistent with other markers
- provides useable feedback to students, including constructive criticisms and suggestions for future improvement

Laboratory demonstrating and tutoring can be an exciting and rewarding experience. The personal and career benefits of demonstrating are as follows:

- provides you with an opportunity to improve your existing skills and acquire some new ones, as you assess students' development of their new knowledge.
- deepens your own understanding of your discipline or field of interest.
- develops your ability to take complex scientific concepts and explain them in everyday language to your lab class. This strengthens professional communication skills.
- through helping others you develop self confidence and confidence in your understanding of the discipline.
- develop leadership, people management and time management skills.

Refer to further reading item 1.

GETTING STARTED

The following are things you might need to consider regarding your employment as a sessional teacher in your school.

Activity	Suggested Action
Internet access/ FAN	<p>You will automatically receive a Flinders Authentication Name (FAN) when you are put onto the payroll system. You will need to activate your FAN the first time you use it and you can find out to do this at https://www.flinders.edu.au/fan/</p> <p>Your FAN becomes your email address e.g. blog0012 becomes the email address blog0012@flinders.edu.au. This is the formal channel of communication and should be read regularly. It is your responsibility to monitor and read flinders email for important communication from the university.</p> <p>Your FAN and password also provides you with access to the University's internet services.</p>
Flinders Learning Online (FLO)	<p>Flinders Learning Online (FLO) is the online learning management system used at Flinders University. You can log in with your FAN and password. Access to particular FLO topics will have to be given by the topic coordinator.</p>
Library Card	<p>Take your payroll number to the Central Library ID Cards desk to obtain your ID card. Your payroll number is usually a six-digit number created by Budget and Payroll Services once you have accepted your appointment and completed the necessary paperwork.</p>
Subject Librarian	<p>Go in and visit your subject librarian. Make yourself known. Sign up for library orientation tour.</p>
Computer Laboratories	<p>Find the labs, and clarify who has access to them and when, and who do you contact if you have a problem with equipment in a lab.</p>
Getting the right forms signed	<p>Do you know how to access the online time sheets?</p> <p>Have you signed the appropriate employment forms to get you paid?</p>

PREPARING FOR TEACHING

It can't be stressed enough, that good preparation is the key to a successful class – for both teachers and students! After all, if you don't know what's going on, how can you expect the students to? This section provides information on how to prepare for a class, so that you can have confidence in your ability to run a session, be it a laboratory, lecture, tutorial or field trip.

Your personal teaching approach

If this is your first move towards the teaching side of learning, or even if you have already had some practice, it is important to put aside time to consider your teaching and what you are trying to achieve. Your approach will be partly shaped by the topic in which you are teaching. Speaking with the other people involved in the topic will help you to look at this but it will also be most helpful to note down a set of guidelines and ensure that these are at least similar to those of the topic coordinator before you start. A few questions to consider could include:

- is the emphasis on teaching concepts, facts or skills or a mix of these?

- are you expected to cover a great deal of new material in laboratory classes or are laboratory classes an extended exploration of ideas introduced in lectures?
- how do you enable the students to have an active role in their learning?

You may also need to consider how the teaching role is going to impact on your other work. For example, if you are a higher degree student, how will you juggle your own research needs and time? It is very important to consider this at the outset.

It is equally important that you give some consideration to the motivation of the students with whom you are going to be associating. For many new students, University is a threatening experience, especially in their first few weeks. Try to remember your own experiences and ask yourself:

- why are the students studying this topic?
- what do they actually want to learn?
- what can you give them to help smooth their way?
- what do they expect of you to help them be successful?
- what do they expect of themselves?
- how might you encourage students to be active, self-motivated and independent learners?

Aims of Laboratory Work and Field Trips

In order to teach and assess a course successfully, it is important to understand the aims and anticipated learning outcomes of each topic. In the short term, the typical aim of a session spent in the laboratory is to provide context for lecture material as well as allowing the student to produce an assessable report. However, the long-term goals of laboratory, tutorials and field classes are much more important. These aims include,

- To support and reinforce the theory presented in lectures by providing students with hands-on, practical experience
- To improve students' understanding of the methods of scientific enquiry through experiments, problem solving and project work
- To develop general skills such as measurement, observation, recording, reasoning, problem-solving, note-taking, team work, and written and oral presentation skills
- To provide students with specialised technical skills
- To increase levels of interaction between students and encourage open communication and exchange of views
- To break down barriers between students and staff
- To enthuse students with the subject!!!
- Periodically returning to these aims will help you make classes a memorable and valuable learning experience for students and will help you evaluate your progress as a teacher.

Refer to further reading section item 1.

Initial meetings with your supervisor

To satisfy the needs of both the students and your topic coordinator, you must know what is expected of you as a laboratory demonstrator. It is important that you know what you are doing before you walk into class and this often means approaching the topic coordinator to find out. Make sure you clarify some general points before you even get started.

Many topic coordinators will hold regular meetings with demonstrators. Preparing for and attending these meetings is not only informative, but also helps you identify potential problems or difficult questions you may encounter *before* the session starts! Before you meet, ensure that you have read all the relevant material in the course manual and that you understand the aims of the session. Arrive at the meeting with any specific questions you have about the

concepts, methodology or equipment that will be used. Make sure you know how to use any pieces of equipment (including audio-visual) and identify the person to contact if there are problems or if equipment malfunctions. It is also a good idea to find out from the topic coordinator where the students are in their learning and what material is currently being presented in the lectures. This will help you link the material presented in the practical class with the theory being taught. Make the most of these meetings - the better prepared you are, the more you will get out of them.

Suggested questions

Topic	Suggested questions	Answers
The course	<ul style="list-style-type: none"> • What are the topic aims and learning outcomes? • Which course(s) is this topic a part of? 	
Role	<ul style="list-style-type: none"> • What is my role? • How much time is expected of me? • How do I organise to get paid? • Am I expected to attend some or all of the lectures? 	
Materials	<ul style="list-style-type: none"> • Can I have a copy of the laboratory manual and any other information students have been given? • Is there a teaching guide? • Where do I get a copy? • Are the books available or am I expected to buy my own copy? 	
Expectations of students	<ul style="list-style-type: none"> • What is expected of the students? • What is the expected level of understanding ? • What is the policy on students changing laboratory practical times? 	
Group allocation	<ul style="list-style-type: none"> • Do students work in groups? • How are students put into groups? • How are students prepared for group work? • Are they allocated or self-selected? 	
Assessment	<ul style="list-style-type: none"> • How is the topic assessed? • How and when should students' work be submitted? • Am I required to assess students' work? (see the Assessment section below for further questions) 	
OH&S	<ul style="list-style-type: none"> • What are the health and safety issues associated with this topic? 	

Support	<ul style="list-style-type: none"> Who can provide me with technical support during the session? How can I contact you if I have a problem? 	
Room Allocations	<ul style="list-style-type: none"> Where are the labs located? Do the labs/tutorial rooms have projectors, whiteboards (& markers) or any other equipment I need? 	
Pay	<ul style="list-style-type: none"> What employment forms do I need to sign? How do I access the online time sheets? How do I organise to get paid? How much am I getting paid? 	Keep a photocopy.
Lectures	<ul style="list-style-type: none"> Is there an orientation lecture? Should I attend? Am I expected to attend some or all of the lectures? 	
Online learning	<ul style="list-style-type: none"> Is Flinders Learning Online (FLO) used actively in the topic? How much am I expected to be involved with online learning? Will I need to undertake FLO training? 	

Planning to Teach

Once you have established what's expected of you, you will need to develop an outline of how you will run the session. In some cases, topic coordinators or experienced demonstrators will be able to provide you with notes. If not, then it's up to you to develop a plan.

Many tutorials and practicals are only 50 minutes long, particularly at first year level. How can you give clear explanations and/or demonstrations to students in this short period of time and expect the students to complete particular tasks or understand the points you wanted to make? What responsibilities do the students have to use their time and yours productively and how do you judge your success? The following guidelines may help you to successfully negotiate these problems.

There are a few questions you might need to address before you begin:

Question	Your Notes
Are you clear what the task is?	
Is it necessary for the students to understand any particular concepts or have any particular skills before they begin this task?	

Is there a time limit - does the work need to be handed in at the end of the session or can it be completed at home?	
Is there a written set of instructions with examples already available to the students, e.g. in their topic guide?	
Is the work in itself an assessment task or is it part of the learning required to complete a separate assessment task?	
Do students need to be reminded about equipment they must bring with them to the class?	
Are there accommodations that need to be made for a student with a disability? What are they?	

These, and any other points which come to mind, will need to be clarified with the coordinator and other teachers to ensure you are all giving the same information.

Planning a Pre- Laboratory Talk

Most laboratory classes will require you to present a pre-laboratory talk. This may cover the following points:

Pre-lab Points	Your Notes
Details of assessment – what is expected, the format of assignments, the assessment criteria, the due date and submission location	
The aims of the session and how these relate to the rest of the course and lecture material	
Definitions of terms or jargon that may be unfamiliar to students	
Introduction and explanation of concepts that are fundamental to understanding and successfully completing the session	Don't rely on students being able to remember them from previous lectures!
How the session will progress – include a rough timetable, if applicable	

A demonstration of how the equipment works	
Any special health and safety issues (see later section)	
Details of clean-up procedure, including disposal of any harmful chemicals and sharps	
A chance for students to ask questions before they get started	

Rehearsal

Run through your planned talk or prelab before the class or lab starts – either in your head, or out loud. This exercise will determine whether you are adequately prepared to run the session and will help reduce any nervousness you might be feeling. Make sure you give yourself enough time for extra preparation if you discover that you're not quite ready. This will also allow you to identify questions that students might ask and will give you a rough idea of how long each section of the session is going to take.

TEACHING STRATEGIES

It is natural to feel a little nervous about facing a class for the first time. Despite how it may seem at the time, this is a positive sign that you are taking your teaching seriously. The following section outlines some teaching strategies that will aid in your demonstration and hopefully calm some of those nerves.

Laboratory sessions

Even experienced teachers sometimes find demonstrating laboratory classes a daunting task. Teaching a laboratory class differs markedly from tutorial and lecture classes, due to the practical, hands-on nature of the sessions. For this reason, the skills required to successfully teach a laboratory class differ from tutorial classes, in some respects.

Laboratory sessions are usually divided into separate sections, each requiring a slightly different teaching strategy. These are listed below.

Task	Strategy
Beginning the lab	Use this time to get warmed up and calm your nerves. Talking to students and asking them questions as they arrive can be a great way of finding out about the material that has been covered in lectures.

<p>The pre-laboratory talk</p>	<p>Talk slowly and clearly and use teaching aids. State what the session is about and cover any important material (see above). At the end, encourage students to ask questions and give them an obvious signal that it is time to start work.</p>
<p>Main practical session</p>	<p>During this time, you will need to answer students' questions. Remember that one important aim of the session is to help students develop their reasoning and research skills. Avoid spoiling students by doing their work for them. Instead, you should use your knowledge of the topic to guide them to the answer – this may involve explaining the theory in an alternative way, or pointing them to a good textbook.</p> <ul style="list-style-type: none"> • Don't miss anybody • Ensure no one student or group takes up the majority of your time • Don't show favouritism • Be sensitive – try not to show students up or make them feel uncomfortable <p>Encourage open discussion and communication between both other students and yourself – it helps to have a few questions prepared so that you can use to break the ice. These can range from the general ('How are you going?'), to the specific ('How would you explain what happened during the experiment?').</p>
<p>Summarising & cleaning up</p>	<p>Regain the attention of the group and use this time to reinforce some of the key points that you want the class to remember. A summing up session should cover some of the following points,</p> <ul style="list-style-type: none"> • A summary of the experiment/project • A link between the practical session and the theory covered in lectures • Any problems that may have been identified • Suggested further readings • Reminder of assignment format and due date • Clean-up procedure

Small Groups or Tutorials

This section of the booklet suggests some strategies for structuring your tutorial and stimulating discussion. Tutorials can be defined as small group teaching. There are many advantages to including some group work in the assessment design, but it must be thoughtfully managed

Tutorials are designed to encourage the exchange of ideas and provide an environment where students have the potential to develop:

- analytical skills
- team work
- skills in cooperative learning and resolving differences
- the ability to talk in front of and listen in groups.

They also allow you, the tutor, to discover any misconceptions and blocks to learning that the students might have.

Don't try to do it ALL. There are limitations to what you can do in the available time

Task	Strategy
Structure your time	Plan beforehand. Possibly outline the plan, with suggested time to be spent, on the board or OHP and invite students to add their interests and questions.
Explain tutorial aims	If aims are not outlined with the preparation task, clarify them with the students and identify how you will recognise that they have been met.
Identify any mis-understandings or difficulties associated with already delivered lecture material	Discuss what students find difficult about lectures and ensure they understand the need to read for lectures if reading is specified. Encourage students to seek clarification at the lectures if appropriate. It can also be very useful to attend lectures yourself even if this is not a specified part of your tutoring role.
Clarify terminology	The topic you are tutoring in may have its own language which has been used by you, the lecturer, or in the readings. Ask if there are any specific words or phrases that need clarification. Rather than answering directly yourself, list terms on the board or OHP and ask the students to respond. Get the groups, facilitated by you, to work out, either in a large group or as a number of small groups, what the terms mean in the context in which they are used.
Clarification of concepts	As with words, the actual concepts may be somewhat difficult to grasp. Rather than simply going through the reading or lecture material, clarify the ideas that will give students the most difficulty. Encourage group interaction and participation.
Get the discussion started	Break large groups into smaller units each with their own specified task. Ask individuals to write down their responses. Give each student the opportunity to respond to a direct question.
Ensure the material has been covered	Leave enough time at the end to round out the tutorial and either give a quick summary or ask students to summarise the main points. Ask the students to list the points which they think still require further discussion or remain unanswered. Use tools like "Muddiest point" (see Appendix 1) to elicit feedback from students.
Identify the implicit learning that has taken place	Take time out occasionally to leave the script and revisit the ideas raised at the first tutorial concerning the purpose of tutorials and the ground rules with which you have been operating both explicitly and implicitly. Ask students to tell you what they have learnt about group dynamics, learning, motivation, organising their own study time etc. This can be done openly using an OHP or board to list their suggestions. Explain to the students that they need to review learning processes which will

	develop their transferable skills. These aspects of learning are often of great interest to future employers.
--	---

General teaching strategies

Providing assistance

There are several strategies for running this part of the session and they are listed below. They can be used exclusively, but are often more valuable when used in combination, depending on how the class is progressing. Pay attention to how each individual in the class is going and determine the strategy that best suits the situation.

Technique	Actions
Summoning	Place yourself in a visible position in the room and wait for students to request help. This strategy does not work successfully for all students, as some are uncomfortable about asking for help. You may need to take the initiative with some of the less confident students.
Use a system	Approach students systematically, one by one (or group by group). This will ensure that you talk to every student in the class. This is a good way of monitoring the progress of group work.
Stay put	Set yourself up in a position where each student has to pass you at some stage during the session. This may be near a piece of equipment, or a specimen. This will enable you to talk to everyone at least once.
Watching	Wait to one side and watch to see which students need assistance. This strategy requires good observational skills. Make sure you offer your assistance in a sensitive way so that you don't look like you are singling out particular students.
Wandering	Walk around the room and randomly approach students. This is a good way to keep students on their toes and allows you to stop and ask questions about how each student is progressing.

Questioning

Questioning is a key element of small group teaching. However, some consideration needs to be made when using questioning as a positive learning tool:

Technique	Actions
Pausing	Allow students time to think about a question before responding.
Re-phrasing	Perhaps the students aren't responding because they have no idea what you mean?
Direct the question in different ways	<ul style="list-style-type: none"> • Question to group followed by volunteer response • Give question, choose individual, and then receive response • Choose individual. Give question then receive response
Redirecting	A useful technique to involve other learners and draw out other views
Reacting	Always react in a positive way despite the response. In the case of an inadequate answer it may be necessary to clarify the question or redirect it to another student.
Probing	Probing questions help to stimulate thinking skills. Teacher may probe for clarification or examples.
Distributing	Make sure the questions involve all the students if possible.

Encourage student questions	Perhaps allow time for reflection. Respond positively to any questions that emerge.
------------------------------------	---

It is important to realise that there are a range of levels at which questions can be asked that lead students to a greater understanding of the material they are learning as well as building their scientific inquiry skills. In general, try to ask open-ended questions that include “what..., when..., where..., why..., how...” rather than yes/no questions.

Recall of known information:

What did you see

What happened when

What do we know about

Looking for relationships and patterns in student knowledge:

What is the difference between

How does connect to what was learnt when

How does change?

Getting students to apply their knowledge:

Can you think of a new example of?

Explain why you think that

What were you expecting to see

Getting students to speculate on their knowledge:

What do you think would happen if

If we wanted to, how could we use

If we did, what do you think would happen?

At some stage, you will be asked a question for which you do not know the answer. There's no need to panic! You can maintain credibility and the students' confidence in you, if you are honest and try to solve the problem in a straight forward way. Try one of these options:

- Find out the answer yourself – let the students know that you will get back to them with the answer. Make sure that you do!
- Work through the problem together – this is a good way to teach students research skills, through example. Have a look through the textbook together, or discuss the problem. Sometimes articulating the problem in a different way provides a solution.
- Encourage students to find the answer – have some good reference material (textbooks and scientific keys) on hand to assist them. This will help students develop their research skills and increase their problem solving abilities.

Refer to further reading section item 2.

Written instructions

If your topic already has a set of written instructions for the relevant task, be the guinea pig and sit down and follow them well before your first practical or demonstration period. Do they work? If not, why not? Where do changes need to be made?

If the instructions need amendment or are not operational it is tactful to discuss this problem with your supervisors before you actually change anything. You may then jointly revise the parts which are unclear and conduct a dry run with the rewritten format.

Teaching aids and equipment

To help students learn, it is important to make your pre-lab talk both informative and stimulating. Teaching aids can be extremely useful throughout your demonstration and their use is encouraged. Some of these include:

- Smartboards
- Black or white boards
- Handouts – particularly if there is no course manual available
- Reference material, including wall charts, posters, text books, & models
- Audio-visual equipment (e.g. online videos, slides, cassette tapes)

Make sure you use these teaching aids to their full potential by considering the following:

Question	Tip
Is the equipment available in laboratory and do you know how to use it?	Check it out before students arrive.
Can the students see what you are presenting?	Make sure that your writing on the board can be seen by those sitting at the back or at the sides of the room
Are you presenting too much information at once?	Try to limit information on the board to half a dozen key points.
If the method of working something out is not in the topic handbook do students need a handout?	It may be better to go through the examples on the board, but be aware that many of the class will be scribbling down the answers to the example rather than working through the method with you as you go. This practice will not help them to become independent learners.

ASSESSMENT

Assessment of laboratory assignments serves two important purposes: to grade students and to provide feedback. In order to mark students' work fairly and consistently, make sure you clarify some of the following questions with your topic coordinator:

Questions	Your Notes
Can you provide me with marking criteria and explain the marking scale?	
What are the students expected to have done?	
Do I take marks off for poor spelling, grammar or referencing methods?	
What is the policy for granting extensions and are there penalties for late submission of work?	
Are marks moderated between demonstrators or double-marked?	
Can students appeal or have assignments remarked?	
How do I deal with suspected breaches of academic integrity?	

If you have not been provided one, it is a good idea to draw up a mark sheet indicating how you will assess the assignment. You may need to take into account factors such as structure, presentation, style, spelling, grammar and referencing methods, as well as content. Returning a filled-in mark sheet with each assignment makes it clear to students how marks have been allocated and provides feedback on sections that require improvement.

Once you have established the marking criteria, there are a couple of ways you can go about marking. Many markers spend time reading several assignments before they start allocating marks. This method gives you a feel for the range of work you will be marking and helps identify great reports from good ones. Some markers read all the assignments and after placing them in a provisional order, allocate the final marks. Either way, it is best to have a look back through the assignments after you have finished, to check that your grading system has been fair. If in doubt, approach the topic coordinator and ask for advice.

Academic integrity

All students and staff have an obligation to understand and respect the rules and practice of academic integrity. It is therefore expected that students and staff will adhere to high standards of academic integrity. The University will provide resources to assist students and staff to be aware of their responsibilities. It is expected that academic staff will provide appropriate guidance, support and feedback to assist students to become familiar with the normal academic conventions relevant to their discipline.

As a teacher, you are most likely to be confronted by a breach of academic integrity in the form of lab report, essay or tutorial paper plagiarism. Demonstrators may also need to be

aware of students inappropriately 'sharing' experiment results. If you notice unintended academic dishonesty, use it as a learning opportunity for the student.

As the University considers this a serious matter, most Schools and Faculties have a formal procedure in place which involves recording incidents and action as considered appropriate by Heads of Schools and Executive Deans.

A good resource to assist you develop the skills required to identify and deal with academic dishonesty and encourage academic integrity is available on <http://www.flinders.edu.au/AIMS>.

How to notice plagiarism

- Inconsistencies in writing style within a piece of written work.
- Language that seems inappropriate for the student's year level.
- Noticeable repetition from one student paper to another.
- Lack of quotation marks or correct referencing.
- Recognition by you of uncited material read previously elsewhere.
- Generally poor referencing technique.

Avoiding plagiarism

- Clearly explain what academic integrity is and why it is considered important. For example suggest to the students that they would not want their research copied without acknowledgement
- Discuss the ways to avoid plagiarism with students before they begin writing
- Go through the avoiding plagiarism handouts available from the Student Learning Centre website
- Draw students' attention to *Making the Grade* (Further readings: item 3) and other suitable publications

Taking action

Despite all your attempts to prevent it occurring it is clear that most assessors will face some degree of plagiarism. How you deal with it will depend on the degree of the problem and the support and action taken within your School or by your particular topic coordinator.

Before you take any serious action, try to:

- Identify as clearly as possible the levels and extent of plagiarism
- If possible, identify the sources e.g. published book, paper, website. Note the particular points you are concerned about
- Discuss your concerns with the topic coordinator and get advice as to how to proceed.

The teacher does not generally have to take further action concerning plagiarism, as Heads of School and Faculty Executive Deans deal with reported incidents.

Informal classroom assessment strategies

Gauging students' progress is important. While the University and the students require a formal assessment of both the students' and the teachers' work you may also want to review your teaching in a less formal way. How do you know the students have 'learnt' what was required in the laboratory class? Can you gauge their progress from their expression, body language, preparedness for the class etc? The more practical classes you do the more familiar you will become. As you progress through the topic material you will clearly enjoy some tutorials more than others. You are also likely to find that some groups work better than others. Group dynamics play a major role in this.

There are, however, strategies you might like to try to improve any problems you perceive. Ideas to test progress in a non-threatening way include:

- have students write a one minute paper in class (see Appendix 1);

- ask each student what was the main idea of the tutorial;
- ask students to write down anonymously what were the five most important points discussed today;
- ask students to identify two interesting ideas and how they might apply these to 'real life' 'every day' situations;
- help students review and evaluate the quality of their lecture notes, lab notes or fieldwork notes.

Feedback

In order to make assignment writing and assessment a valuable exercise, it is important to provide students with feedback. Adequate feedback is fundamental to marking. If the student is going to learn from the assessment activity they must read and act upon what you have written and respond accordingly in their next piece of work.

Feedback needs to:

- be prompt;
- give a clear indication of how work can be improved;
- be user friendly for both the marker and the student making efficient use of both parties time;
- allow students to adapt and adjust their learning strategies;
- support learning, so students know how to improve their performance;
- focus on mastery not effort or time spent;
- lead students to being capable of assessing their own work.

All students need to receive adequate feedback, not only those who did not do so well. Students who do well need to know why they achieved a higher mark and what else is needed to enhance their performance. They need to understand how they achieved the grade they have.

Usable feedback should contain:

- **descriptions** of the features of the student's work (what has been done and/or not done);
- **evaluative judgements/comments** linked to criteria and standards that indicate the features of the work that add to or detract from its quality (how well things have been done)
- **suggestions** of alternative approaches that would lead to improvement
- **explanations**, or directions to resources, that demonstrate an improved possible approach that the student could use, and
- **motivating comments** (praise, encouragement, etc.) that indicate that an aspect of the work is praiseworthy and explains why the element being praised is good.

Suggested feedback mechanisms

- Via FLO's assignment system
- Use a department mark sheet
- Create your own checklist, a proforma on which you mark the relevant points for attention.
- Hand out an A4 sheet to the entire class with examples of appropriate responses, examples of some misconceptions with some explanations about why they were not correct, and resources for follow-up study to correct the misconception.

- As well as written feedback, it is also useful to provide some general feedback to the whole class. This can be done at the start of the next session, if you demonstrate or teach the class on a regular basis.
- Use positive reinforcement and congratulate students on what they have done well
- Make *constructive* criticisms on potential improvements
- Clearly explain why you have awarded a particular mark
- Try to sign off on a positive and encouraging note
- Where applicable, encourage students to come and discuss the assignment with you

SUPPORTING FIRST YEAR STUDENTS

The first year at university provides an opportunity to support students as they develop the skills and abilities to succeed at university as well as aiding them as they gain an understanding of what may be required of them when they enter the workplace (Lizzio, 2004). Developing these understandings is important because the changes to Higher Education Policy that have been implemented since 2009 have led to an increase in both student numbers and diversity within student populations at university (Australian Government, 2009). The increases have created a gap between the way in which university staff view and understand students; the expectations that students have of university and the first year students' academic, cultural and social experiences.

As a sessional staff member there are a number of things that you can do to help students develop a good understanding of what is expected of them at university and how university differs from their previous experiences of learning (whether that has been in the workforce, at high school, at another learning institution or elsewhere). What you can and cannot implement will depend on the way in which your sessions are set up and run, but some things most people will be able to implement include:

- Do not make any assumptions about what the students in your class know
 - They may know more than you realise or less than you realise
 - If you require them to do something tell them (even if it is something very basic like completing a lab workbook or bringing something to your session)
- Develop ways to get to know your students
 - Ask them to write a short postcard indicating their hopes and fears
 - Play Human Bingo
 - Ask them to participate in debates about the topic under discussion
- Be consistent about the feedback you provide and the way that you provide it
- Set times for students to consult with you and leave these on your office door.

Make sure you are aware of the range of services that are available to support students, what each offers and how these services can be accessed. The services include:

- Transition to University office;
- Student Learning Centre;
- Health, Counselling and Disability Services;
- OASIS - Faith, Spirit, Community;
- Tjilbruke Student Services (which is part of the Yunggorendi First Nations Centre for Higher Education and Research);
- Library; and
- Careers & Employers Liaison Centre.

Remember: The first year at University is a time of social and academic transition for most students, and their early experiences are critical to their academic success and perseverance in study.

For resources and further ideas about how you can help and support your first year students visit the “Inspiring Achievement in First Year University Students” web pages at http://www.flinders.edu.au/teaching/quality/first-year-students/first-year-students_home.cfm

References

Australian Government. (2009). *Transforming Australia’s Higher Education System*. Retrieved from <http://www.innovation.gov.au/HigherEducation/Documents/TransformingAusHigherED.pdf>.
Lizzio, A. K. (2004). First-year students' perceptions of capability. [Article]. *Studies in Higher Education*, 29(1), 109-128.

HEALTH AND SAFETY ISSUES

As a teacher and supervisor of students, you are responsible to ensure that students are aware of the health and safety policies of the University. Familiarise yourself with these policies and talk to students about general health and safety issues, as well as those specific to the day's session. If you are in doubt about any health and safety issues within the laboratory, you should approach the laboratory technician or topic coordinator, for advice.

For all emergencies:

- Call the AMBULANCE/POLICE/FIRE BRIGADE. Phone 000 - remember to add an extra 0 if you are calling from an internal university phone.
- Give clear, concise instructions to the operator.
- Notify University Security on ext. 12880 and give them the same information. Security will meet the emergency service and guide them to the correct location on the grounds.

Incident	Response
Evacuation	<ul style="list-style-type: none"> • Every laboratory contains an evacuation map showing the assembly point – familiarise yourself with this. • Read evacuation instructions and identify the names and locations of fire-wardens and first-aiders – in an emergency, students will look to you for assistance. • Ensure that you understand all emergency procedures for your location. • When Alert signal sounds (Beep ...Beep...), make the lab safe and prepare the class to evacuate. Await further instructions via the PA or from the Warden • When evacuation signal sounds (whoop...whoop...) <ul style="list-style-type: none"> • Proceed via the safest route to the assembly area. Do not use lifts. • Assist mobility impaired people as necessary • Follow the directions of the Warden(s) • Do not re-enter the building until instructed to do so by persons in authority.

Fire	<ul style="list-style-type: none"> • Find the location of the nearest fire extinguishers and fire blankets • Familiarise yourself with the type of fire extinguishers available and their correct usage.
Chemical spill	<ul style="list-style-type: none"> • Familiarise yourself with the appropriate processes in the event of a hazardous matter spill.
Medical emergency	<ul style="list-style-type: none"> • Provide an opportunity for students (in privacy – NOT in front of other students) with known medical conditions, to inform you of any procedures they may require in an emergency • Identify First Aid officers in your work area • Find the location of the nearest first-aid kit and emergency showers
Protective clothing	<ul style="list-style-type: none"> • Work out what level of protective clothing students require – lab coats, gloves, eye protection?
Prevention	<ul style="list-style-type: none"> • Never leave a lab and ensure that the rules are obeyed and adhered to. Eject a student who refuses to comply.

The rules governing behaviour in the laboratory sometimes differ depending on the type of session, but there are a few standard rules that should be pointed out to students.

- No eating, drinking or smoking in the laboratory
- Close-toed shoes should be worn at all times
- Hands should be washed at the end of the session
- Long-hair should be tied back, where appropriate
- Naked flames should not be left unattended
- Sharps should be disposed of in marked containers only
- Hazardous chemicals should be disposed of in marked containers and not into the sewage system

TROUBLE SHOOTING

At some stage, you will meet a problem you may not be prepared for. The following are situations that have commonly occurred with some suggestions for handling and avoiding them. There's no need to panic! You can maintain credibility and the students' confidence in you, if you are honest and try to solve the problem in a straightforward way.

Problem	What to Do	How to Avoid it
Question for which you do not know the answer	<ul style="list-style-type: none"> • Find out the answer yourself – make sure that you get back to the students with the answer! • Work through the problem together • Encourage students to find the answer by assisting them research the correct answer 	<ul style="list-style-type: none"> • Accept that you don't know anything! • Prepare as soundly as possible before hand • Have reference materials on hand to encourage students to find the answer
Door to teaching room is locked	<ul style="list-style-type: none"> • Tell the students to wait. Go and ask your departmental Admin Assistant to help you urgently. • Ring Security (1 2880) 	<ul style="list-style-type: none"> • Get there early. • Find out who has keys to rooms and their phone number in case you need them.

Harassment of one student by another in class	<ul style="list-style-type: none"> • Explain why you have a problem with the behaviour and why it is unacceptable. • If further action is required, refer to Topic Coordinator or Head of Department. 	<ul style="list-style-type: none"> • Establish expectations from week 1 so that students know what kind of behaviour is expected • Get the group to set ground rules regarding behaviour
You ran out of time in class	<ul style="list-style-type: none"> • Offer a brief summary of what has been missed and what they need to read • Briefly cover the material you missed in the next class 	<ul style="list-style-type: none"> • Plan carefully and keep to your plan • Allocate time for all activities including administration and discussion • Keep your eye on the clock
Someone else is teaching in your room	<ul style="list-style-type: none"> • Check with the school office whether the other person is timetabled into the room • If not, explain and ask them to go elsewhere. If yes, ask the admin assistant for an empty room. 	<ul style="list-style-type: none"> • Know who is in charge of room scheduling in your unit
Student complains about the marks you have given	<ul style="list-style-type: none"> • Refer to assessment criteria you marked to • Ask them to demonstrate to you where in the assignment they meet the various assessment criteria • Refer to departmental policy 	<ul style="list-style-type: none"> • Explain assessment tasks and criteria clearly • Mark carefully • Cross-check marking with other teachers • Know the policy on disputes about marking • Keep records of your marking

EVALUATING YOUR TEACHING

So how do you know if you are doing a good job?

It is useful, and indeed necessary, if you intend to continue in an academic role that you constantly review your work as a teacher. Some of this process will take place through the University requirements for Student Evaluation of Teaching (SETs) to be undertaken at regular intervals.

Student Evaluation of Teaching (SETs)

SETs are pre-developed questionnaires completed by the students towards the end of the topic teaching period. While they generally include a series of standard questions, topic coordinators or teachers can add in other pre-written questions or their own questions. Students usually complete SETs during a lecture period or online and the completed proformas are returned to the relevant individuals after analysis. The contributions from the students are anonymous and the results returned only to the teacher and his/her supervisor.

If you have taken time at the beginning of your topic teaching period to discuss aims and objectives, and also student and teacher expectations, it is a good idea to spend some time revisiting these early ideas towards the end of the semester and before the SET takes place. Remember, students may be completing multiple SETs within a short period of time, often more than one in each topic. A reminder of your joint goals for the topic is therefore useful in assisting students to respond thoughtfully.

SETs can be a useful tool in revising topic content, teaching methods, what worked, and why, and are also becoming more important for job applications, promotions etc.

Informal Review

A more personal review/record system is also useful. A laboratory practical record could include:

- the topic outline;
- number of students in each group;
- if there was too much/too little material to cover;
- method used to conduct particular practical exercises
- your own estimation about how the individual laboratory practicals worked;
- skills you think students learnt or reviewed e.g. analysis, summary, group leadership;
- how you might tackle this particular topic next time;
- student comments.

This is pivotal for adding to your CV as evidence. Remember that your experiences in these positions provide evidence of your ability to manage and supervise groups of people, work with diverse groups, work independent and as part of a team environment: all common criteria in position descriptions! Don't forget to ask for a reference from both students and your supervisor at the end of the teaching period.

IN CLOSING...

Remember that you are a bone fide valued member of staff at Flinders University. There is a wealth of support and opportunities that are there for you to use if you choose to. If you are a student as well, you can access all the student services such as Career advice and Health services. As a staff member, you are able to access professional development opportunities through the Centre for Innovation in Learning & Teaching and can access support from the HR services.

FURTHER READINGS

1. "Learning to Teach: Assisting with Laboratory Work and Field Trips." Andy Ward with David Baume and Carole Baume, published by The Oxford Centre for Staff and Learning Development, 1997.
2. "Tutor and Demonstrator Development Program" The University of Sydney, Faculty of Science. <http://science.uniserve.edu.au/courses/tutortraining/documents.html>
3. Making the Grade: A Guide to Successful Communication and Study, Third Edition by Professor Iain Hay, Dianne Bochner, Carol Dungey, published by Oxford University Press, Australia, 2006. Multiple copies available in the Flinders University library.

The Minute Paper

Please answer each question in 1 or 2 sentences:

1. What was the most useful, meaningful, or intriguing thing you learned during this session?

2. What question(s) remain uppermost in your mind as we end this session?

Source: Angelo, T. A. & Cross, K. P. 1993 *Classroom Assessment Techniques*, San Francisco, Josey-Bass Publisher