Teaching Assistant
GUIDE

McMaster University
CENTRE FOR
LEADERSHIP IN LEARNING

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McMaster University

Teaching Assistant Guide 2012-2013

Teaching Matters

Teaching assistants are essential to undergraduate education at McMaster. Working as a teaching assistant also offers you unique opportunities and experiences that will contribute to your personal and professional development.

T eaching assistants at McMaster fill a number of important roles. You may lead class discussions; supervise a lab group; mark assignments; meet and correspond with students; or facilitate help sessions. Whatever role you fill, your work is very important to the success of the students and instructors you work with. So that you may confidently fill your role, this guide aims to provide you with some strategies for fostering an inclusive and dynamic teaching environment and to familiarize you with McMaster policies.

As important as teaching assistants are to undergraduate education, the opportunities and experiences that come from being a teaching assistant are also very valuable for you. Whether you plan to pursue an academic career or intend to enter a field that does not have teaching as a component, the skills you acquire as a teaching assistant are sure to benefit you. These skills include: facilitating discussions; planning and delivering oral presentations; evaluating the work of others and offering constructive feedback; and experience designing and assigning projects.

While your experience teaching will offer you valuable experience, teaching is not your only job: you have many other responsibilities, not the least of which is your role as a student. This guide therefore aims to provide suggestions that will make your role as a teaching assistant not only enriching for you and your students, but also easier and more efficient, thus allowing you to succeed as both a student and as a TA.

This is an introductory guide and is not intended to be comprehensive, but rather it is meant to provide suggestions and ideas for you to test out and refine in ways that respond to your students and satisfy your expectations as a teacher. We hope that you will take advantage of the resources and professional development opportunities of the Centre for Leadership in Learning and the Teaching Assistant Network. The Centre for Leadership in Learning offers a range of workshops designed to enrich your teaching experience.

We hope that you find your teaching experience engaging and rewarding and look forward to seeing you at the Centre for Leadership in Learning.

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Teaching Assistants at McMaster

This section explains what a teaching assistant is and what a teaching assistant does.

McMaster began employing teaching assistants in 1985 to assist course instructors. Teaching assistants may be graduate students, undergraduate students or individuals who apply to specific departments. Teaching Assistants are essential members of the teaching community; in 2010, McMaster University employed 2295 Teaching Assistants.

The duties assigned to teaching assistants vary depending on the course and the instructor. For instance, teaching assistants may lead weekly tutorial groups, grade essays or assignments, supervise laboratories, or work as a "super tutor." Before your teaching assistantship begins you will meet with the course instructor to discuss and agree upon your duties. Together with the instructor you will complete an "Hours of Work" form that specifically details your duties.

This form not only specifies what duties you will perform, but also how many hours you will devote to each duty. According to the Collective Agreement between CUPE and McMaster, teaching assistants at McMaster work 130 hours per term. By specifying what duties you will perform and by estimating the time commitment of these duties, you can ensure that you devote the appropriate and fair amount of time to your teaching responsibilities.

> **Note**
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> All teaching assistants, both graduate and undergraduate, demonstrators, tutors, super tutors and markers at McMaster are represented by CUPE local 3906. The terms and conditions of TA work are regulated by a Collective Agreement between CUPE and McMaster University. The contract is binding for both parties, so please take some time to become familiar with the Collective Agreement including the Hours of Work form, benefits, etc. If you have questions or concerns about your TA role, you can contact CUPE 3906 at cupe3906@mcmaster.ca or call 905-525-9140 x24003. For more information about CUPE3906 visit www.cupe3906.org.

Possible Duties

Tutorial Leader
Tutorial leaders regularly meet with a group of students. The number of students will depend on the Department and the nature of the activities to be conducted in tutorials. Tutorial leaders may attend lectures; read the assigned material; take attendance; lead student field trips; evaluate student participation; lead discussions; review course concepts in a mini-lecture or question and answer session; administer tutorial assignments (presentations, quizzes, etc.); respond to student correspondence; hold office hours; grade assignments, tests or exams; and meet with the course instructor to report on tutorial activities.

Laboratory Supervisor
Lab supervisors attend and supervise student laboratory sessions. Lab supervisors may attend lectures; complete the pre-lab activities or reference material; grade laboratory assignments; review and enforce safety regulations; demonstrate laboratory techniques; respond to student correspondence; hold office hours; and meet with the course instructor to report on laboratory activities.

Marking Assistant
Marking assistants, or "markers," are principally responsible for grading. They may grade assignments, tests and/or exams. Marking may be distributed throughout the term or may fall in clusters, depending on when assignments are due. Markers may develop a marking rubric; provide written and/or oral feedback; respond to student correspondence; hold office hours; give presentations on expectations for assignments; and meet with the course instructor to discuss the grades or the grading process.

Super Tutor or Head TA
The duties of the "super tutor" will differ depending on the course and the instructor. Some instructors may ask that these TAs offer guidance to other TAs in the course section or hold workshops on a particular topic for other TAs. The "super tutor" may hold sessions for all students on a particular topic (e.g. writing essays or preparing a lab report) or hold additional office hours to meet with students. The "super tutor" might be required to mark assignments, attend lectures, or deliver a lecture. Because the duties of this position tend to vary a great deal be sure to clarify with the course instructor what will be expected of you and check in regularly to ensure that you are comfortable completing the duties you have been assigned.

Other Duties Not Specified
The positions and duties specified above may be included in your hours of work form, but other duties, not specified here, may also be included. If you have any questions or concerns about the duties you are being asked to perform, do not hesitate to contact your CUPE 3906 representative or CUPE 3906 directly.

Colleagues in the Teaching Workplace

Instructional Assistants:
Instructional Assistants work with departments and instructors to facilitate teaching. Instructional Assistants frequently work with larger, early year courses. They may coordinate a particular component of a course. These may include some combination of organizing field trips, laboratory operations, tutorials, test days, marking responsibilities, etc. Instructional Assistants typically have extensive experience with course material and may provide instructions or guidance to Teaching Assistants working on a course. They sometimes take on some administrative roles that pertain to Teaching Assistant contracts and hours of work.

Laboratory Technicians and Staff

In your teaching work, in particular if you lead labs, you will likely encounter laboratory technicians who attend to the functionality of the lab. These staff members may take care of set-up, maintenance and acquisition of lab materials. It is beneficial to get to know the lab staff and to adhere to established laboratory standards created by laboratory staff.

Departmental or Program Administrative staff

Most departments or programs have administrators who coordinate the operations of the department. This person likely coordinated your TA contract and will send out emails regarding Teaching Assistant training opportunities and meetings in the department. This person will also likely have key information about logistics of the department (use of keys, photocopiers, room bookings), academic matters (prerequisites, contacts for teaching concerns) and insight into departmental culture.

Instructors/Professors

In your work as a Teaching Assistant, you will be working with an Instructor or Professor. At the university, Sessional Instructors, Teaching Track professors, Tenure Track professors and Contractually Limited Appointment (CLA) professors teach courses. Sessional Instructors are hired to teach an individual course for a specific department and may work at multiple universities and have limited time on campus. Teaching Track professors are permanent faculty whose duties are primarily teaching. CLA professors may focus on teaching and/or teaching and research but are in temporary positions (typically multi-year contracts). Tenure Track professors are permanent faculty whose duties include research and teaching. While your duties will likely not change depending on whom you are working with, these categories can be helpful for understanding your colleagues' positions and the working life of the university.

Training Opportunities

You have several opportunities to receive job training before and during your teaching assistantship. The first opportunity is **Graduate Student Day**, which is held the first Wednesday after Labour Day each year. This free, one-day event offers a range of workshops that offer tips and strategies to improve your teaching.

The second opportunity is **Education 750: Principles and Practices of University Teaching**. This graduate level course helps prepare students for an academic teaching career by offering an introduction to research and theories on teaching and learning in universities and by allowing students to practice relevant skills (e.g. lecturing, leading discussions, active learning techniques). Students also have the chance to prepare a teaching philosophy and a course design. The course meets for three hours a week over 13 weeks and is offered three times a year. Go to the CLL website for more information and instructions for enrolling in the course.

A third opportunity is the Workplace Health and Safety training which each Department provides before you begin your duties. The hours you devote to this training should be included in your Hours of Work form.

The **Centre for Leadership in Learning** runs a variety of workshops and events throughout the year that may be of interest to you. Keep a close eye on http://cll.mcmaster.ca for advertisements for these workshops. Some workshops require registration.

Many departments offer training opportunities for teaching assistants in the way of workshops, guidebooks, course specific meetings and orientation sessions.

Finally, the **Teaching Assistant Network** gives you the opportunity to get more involved in teaching and learning here at McMaster. The Teaching Assistant Network brings together interested TAs from all departments on campus to design and run department specific workshops. If you would like to get involved in TAN either by running a workshop or participating in one, please contact tanet@mcmaster.ca for more details.

Teaching in an Accessible and Inclusive Classroom

This chapter introduces strategies and resources for creating and maintaining an inclusive and accessible classroom. It explores what an "accessible and inclusive classroom" is and what steps you can take to create one through your teaching.

The Accessible and Inclusive Classroom

What is an inclusive community?

Human Rights and Equity Services at McMaster describes an "inclusive community" as "one in which there is real, visible and meaningful representation of the diversity evident in the wider community at all levels and in all constituencies on campus (faculty, staff, students, administration), one in which all members feel safe and empowered, valued and respected for their contributions to the shared purposes of the University; research and educational excellence. It is a community where the rights of all individuals and groups are protected. Inclusion occurs when an organization provides equitable access to its services, benefits and opportunities, when systems and structures facilitate full participation by all members and when members are treated equitably and recognized for their contributions. The key ingredients are equitable access, participation (especially in the decision-making processes) and equal attention to the needs and aspirations of all."

McMaster University has identified and is pursuing three strategic goals (Refining Directions, 2008). Your work to create an inclusive and accessible classroom responds directly to the third strategic goal, which is "to build an inclusive community with a shared purpose".

What is accessibility? What does accommodation mean?

Accessibility, in the context of the university, refers to the extent to which all classes, resources and experiences of McMaster University are available to students, faculty, teaching assistants and staff. In keeping with the Accessibility for Ontarians with Disabilities Act, university education must be accessible: this can sometimes mean that accommodations are put in place for persons with disabilities. An accommodation entails the removal of barriers to accessibility – for example, the captioning of videos shown in class, the availability of materials in large print formats, wheelchair accessible buildings, note taking services or greater time allowances for assessments. Students are given a variety of accommodations to suit their needs in each of their courses. Bear in mind that students do not always want accommodations to be applied to all courses. Teaching staff (instructors and teaching assistants) should meet with students to discuss what their needs are.

What is an inclusive and accessible classroom?

An inclusive classroom is a classroom in which all students and instructors are invited and welcomed to contribute ideas, views and concerns. In an inclusive and accessible classroom content is selected from a broad range of sources and is presented through a variety of teaching methods. Everyone in the class is collectively responsible for contributing to the accessible and inclusive classroom by asking questions, challenging assumptions and allowing for mistakes to be made. Teaching assistants and instructors also have the responsibility of providing individual accommodations to create accessible classroom spaces and experiences Consult the Student Accessibility Services website for an outline of student and teaching staff responsibilities with regard to accommodations and accessibility. Student Accessibility Services advises students to begin a conversation about accommodation needs. An accessible classroom is one in which accessibility is fostered and where accommodations are established and supported by teachers and students alike.

How do I create an inclusive and accessible classroom?

It may feel like a lot of work to create an accessible and inclusive classroom, especially if you are new to teaching and are already worried about creating a classroom at all. There are some steps that you can take to begin creating an inclusive and accessible classroom and there are resources available on campus for teaching assistants seeking additional ideas and support.

A note on power in the classroom

It would be naïve to suggest that a well-meaning TA can, with the right tips and tricks, resolve all inequality and bias that influence interactions at the individual and institutional levels. Indeed, we know that forces of oppression and power differentials operate in many ways (for example, influencing who is and is not chosen to speak on a topic, through racist and homophobic 'jokes,' via a choice of non-inclusive curricular matter, or through threat of violence. However, recognizing that inequities like racism, sexism, classism, ableism, homophobia, and ageism are deeply ingrained in our culture and communities is *not* a way of letting us off the hook. Knowing that our interactions are influenced by broader injustices brings a great measure of responsibility to each member of McMaster University to work in concert against often invisible systems of privilege and oppression and toward a more just, inclusive and accessible learning environment.

Creating an Accessible and Inclusive Classroom

1. Recognize any barriers that might keep a student from fully participating in your class and work to remove them. Barriers can be found in attitudes; in the architecture of a classroom; in the way communication is carried out; in the ways technology is used; and in the "system" itself. To find out more about each of these barriers, you can go to http://www.mcmaster.ca/accessibility.

2. Get to know your students! If you are comfortable, tell them a little about yourself (eg relate your interest in the course subject matter or briefly describe your research project) and allow them the chance to tell you something about themselves. You could do this by inviting each of them to visit you during office hours, to send an email or voice message, or by chatting before and after class. Encourage your students to get to know one another. You could do this by working in small groups; having a round table discussion; or working with partners. Getting to know your students and expressing your commitment to creating an accessible and inclusive classroom conveys 'who you are' as a teacher.

3. Set up classroom guidelines with your tutorial or lab group during the first class of the year. Specify what your expectations are for participation, attendance, deadlines, and classroom behaviour and discussion. Allow students the opportunity to respond to these expectations and to contribute their own. Be prepared to challenge students (or yourself) when you fail to meet these expectations.

4. When setting your attendance policy and carrying out your attendance keeping, make sure you are aware of religious holidays that may exempt some students from attending a particular class. You can check here http://www.mcmaster.ca/hres/religious_holidays.html to find out when particular holidays fall in a given year. Be sure that you systematically take attendance and do not rely on your memory to note how often particular students have missed classes. If a student raises a concern about attendance related to accessibility, meet with the student and the course instructor to review their letter of accommodation and adhere to the specific accommodation needs outlined in the letter. Ensure that you, the student, and the instructor understand the accommodation being made.

5. Clearly explain your grading criteria to your students and allow an opportunity for students to express any concerns they might have about the criteria. Make sure you clearly communicate (both orally and in writing) what modes of evaluation you will be using. Outline explicitly for students how grade disputes will be handled. You might want to create a written copy of these criteria and ask the course instructor to post it on Avenue to Learn.

6. In class discussions, strive to use variety in your cultural reference points or ask for examples from your students in order to maintain diversity in the kinds of examples that circulate. For example, when using examples of names seek to draw from a spectrum of linguistic and geographical backgrounds. If discussing families or domestic life, work to represent a variety of family forms. Encourage students to think critically about what is presumed to be 'normal' in your field of study.

7. Your instructional strategies and assessment tools should likewise be varied. If you prefer one instructional strategy to another (i.e. organized debate over discussion) consider including a handout, video link, chart or group follow-up discussion to allow students who learn in various ways to be included. Shifting your teaching format will help to draw more students into participating, and create more opportunities for students who may be reluctant to engage.

8. Give students frequent opportunities to provide you with anonymous feedback both about the course content and about how the class is run. Be prepared to respond to the feedback either by making changes or by explaining to your students why you cannot make a particular change (consult 'Evaluating Your Teaching') for more information on gathering feedback from students).

9. Recognize the confidentiality of students' academic accommodations. Many students find it very difficult to disclose, even to you and the professor, that they have a disability. Remember that students are only formally required to give you a list of their accommodations and no information about their diagnosis. Be careful not to breach a student's confidentiality by drawing undue attention to their disability or to their accommodations in a classroom setting. Discussions related to this subject should take place in privacy (for example, in your office).

10. If you have further questions about accommodations more broadly or for a specific student, contact the Disability Counselors in Student Accessibility Services (SAS). If you have more concerns about equity and inclusion, contact Human Rights and Equity Services (HRES).

For more information on challenging oppression and working to create an accessible and inclusive classroom, check out the following links:

http://opirg.ca/ao/Op_Main01.html: OPIRG McMaster (Ontario Public Interest Working Group) has created an Anti-Oppression web site, a great resource for anyone interested in learning more about oppression (including racism, classism, sexism, discrimination based on sexual orientation, disability,

religion, and age). It offers ideas of how to interrupt oppression and become an ally in struggles for equity and the creation of a positive space.

www.ryerson.ca/lt/resources/inclusiveclass: list of over thirty articles/web resources on inclusivity in the classroom with web links.

http://www.mcmaster.ca/hres: Human Rights and Equity Services at McMaster, an office that responds to enquiries and concerns about discrimination on campus.

http://www.tss.uoguelph.ca/projects/uid/: This page, from the University of Guelph's Centre for Open Learning and Educational Support, provides resources for teaching assistants and faculty on Universal Instructional Design. There are excellent suggestions here for different aspects of teaching assistants' work that can be undertaken in ways which are accessible and inclusive.

The Civil Workplace

This chapter discusses strategies and resources for creating a civil workplace both in and out of the classroom. What does civility mean in the workplace and/or classroom? Possible sources of conflict are identified, and suggestions are given for managing/preventing these problems.

Civility in the Workplace

What is a "civil workplace"?
A civil workplace is one in which all employees work and interact in a courteous and respectful way.

Workplace Relationships
In your role as a TA at McMaster, you will work with a variety of other employees on campus. The following are a few examples that you may encounter during your teaching experiences.

The Instructor:
In some courses you will interact with the instructor on a regular basis while in others you may work independently. In instances where you interact directly with the instructor, it is important that you clearly communicate any questions or issues that you may have. In the case that you are unsure of how to handle an issue with marking, a student's conduct, or any other concern, you can turn to the instructor as the ultimate authority in the course. It is important to communicate issues with the instructor very clearly and ask for advice. This will decrease the probability of a simple issue escalating in the future.

It is likely that, at some point in your experience as a TA, you will disagree with the instructor about a decision that they have made in the course. If you have a disagreement, it is important that you respect the opinion of the instructor. While it can be intimidating to disagree with the instructor, it can be beneficial to openly discuss a disagreement with them. Bearing in mind that no party may violate McMaster policies such as those on Academic Misconduct, the CUPE Unit 1 Collective Agreement, or Provincial and Federal law, in the case that your disagreement is not resolved, it is important to at least understand and respect the instructor's decision and their authority in the course.

If you are a graduate student or conducting any research on campus, the instructor of the course may also be your supervisor. It is important to be aware of the difference between the TA-Instructor and Researcher-Supervisor relationships. Be careful to avoid the mixing of TA and research duties. Be aware of the hours of work that you are contracted for and do not allow you Supervisor to rely on you to perform additional TA duties outside of your contract. CUPE has also created a helpful "TA Work Log" form to help you track your hours worked on various duties and ensure you don't work beyond your contracted hours.

http://www.cupe3906.org/wordpress/wp-content/uploads/2010/06/TA-Work-Log.pdf

If your duties shift over the course of the term, or you believe you will be unable to complete all required work within the hours specified on your Hours of Work form, communicate this fact to the course instructor for whom you work. The two of you can then make amendments to your Hours of Work form as required. This process is outlined in the Collective Agreement in Article 12.04, "Hours of Work Adjustments /Additional Hours of Work." Full text of the Collective Agreement can be found at http://www.cupe3906.org/wordpress/.

Other TAs

In some courses, you may find yourself working with other TAs, either directly in your lab/tutorial section or as colleagues assigned to the same course. If you work in the same lab/tutorial section, it is important to meet well in advance of your first session to ensure that the duties have been clearly determined and that you both agree on the structure of the session. If you are working with a more experienced TA, be sure to ask them any questions you may have about the session or the material being covered. It is OK to admit that you are unfamiliar with a topic and to seek help.

In a situation where you are sharing duties with other TAs (marking, preparing/conducting a lab/tutorial, etc.) it is important to be clear about your responsibilities and how they may or may not affect the work of your colleagues. Ensure that you are respectful of the needs and opinions of the other TAs. If a conflict does arise, try to be understanding and respectful. If you are unable to resolve the conflict on your own, contact the Head TA or Instructor of the course for assistance.

Staff:

There are many staff members on campus who are here to provide a variety of services to Instructors, TAs and students. As a TA, you will likely need to access a variety of resources in order to perform your duties. Administrative Assistants, Lab Coordinators and Instructional Assistants all have their roles in preparing and delivering course materials. For example, if you require access to lab equipment or a tutorial room to prepare for your next session, you may need to contact an Administrative Assistant or the Lab Coordinator.

At times you may need to use departmental resources (eg printer, photocopier) to perform your TA duties. Please consult with your employment supervisor / course instructor to determine departmental policy on use of such resources. In some cases, you will be able to use them directly; in others, you will need to request assistance from an Administrative Assistant or other staff member. Remember to treat all colleagues and staff with respect and to make requests in a timely manner to ensure you are able to secure needed resources.

The Civil Classroom

What is a "civil classroom"?

A civil classroom is one in which students and instructors strive to respectfully respond to sensitive subject matter and charged conversations. It is a classroom in which students and instructors aim to minimize disruptive behaviour and to respond appropriately to disruptive behaviour when it does occur.

> **Note**
>
> It is easier to prevent disruptive behaviours than it is to deal with them after the fact. By defining your expectations for classroom behaviour in the first class you can prevent many problems before they occur.

Preventing Conflict with Students

Have a discussion or distribute a handout in the first class that covers expectations for:

- Attendance: May students arrive late or leave early?

- Participation: Do students need to participate in discussions? Is there a limit on the number of times one student may respond during a tutorial? Is there a limit on the length of a student response? Who sets the agenda for the class?

- Deadlines: what will happen if a student's assignment is submitted late?

- Technology: What are your guidelines for the appropriate use of laptops, cell phones, etc.? What should students do if they are expecting an important phone call? What is your policy on headphones in the classroom? What are the guidelines for online discussions and message boards?

- Formality: Should students address you as 'madam or sir' or by your name? Do students need to raise their hands before contributing a response? Are students permitted to eat meals or snacks during class meetings?

- Feedback: When will students receive feedback from you? How can they give you feedback? What will you do with that feedback?

When you are setting these expectations make sure that you speak to the course instructor if you have any questions or if you feel like a particular policy will apply to the whole course (i.e. late papers). You need to be comfortable with the expectations that you have set, and with explaining and enforcing them once they are in place. If you encounter a conflict, make sure to contact the course instructor immediately to inform them and to ask for their support.

It is also important to allow students the opportunity to provide feedback about the expectations you have set and to contribute additional ideas. You can encourage students to provide this feedback by leading a discussion about these expectations, inviting students to email with comments, or giving time in class for students to

anonymously write down their feedback. Including students in this process is essential for ensuring that they feel accountable and know that you appreciate their personal expectations for the class.

Specific Conflicts

Review these examples of difficult situations and consider what you might do in each case. If, having read the relevant sections of this Guide, you are unsure of what an appropriate response might be, check with your course instructor, another TA or contact the Centre for Leadership in Learning's Teaching Assistant Coordinator at tanet@mcmaster.ca for suggestions.

A student answers a question incorrectly.

During a discussion a student makes a comment that you perceive to be inappropriate.

A student comes to your office hour to discuss a grade they feel is unfair or unjustified.

One student in your class consistently makes inappropriate jokes before and after class time.

A student invites you out on a date.

IF IN DOUBT - SEEK OUT HELP

Special Cases

The following are examples of difficult situations requiring specific responses, often involving the support/mediation of a third party. In any such cases, you should inform the course instructor of the problem as soon as it arises, and keep in contact as events unfold. Instructors will often be involved in the resolution and follow-up to such incidents. If you have any questions or concerns about either the situations or the responses please contact the Centre for Leadership in Learning or the Teaching Assistant Coordinator at gradnet@mcmaster.ca

A student comes to you in emotional distress, or you suspect they are in emotional distress.

Pay attention to warning signs that a student might be in difficulty (e.g. depressed, withdrawn, repeated falling asleep in class, marked change in appearance, uncharacteristic change in academic performance, uncharacteristic change in class attendance, unusual or exaggerated emotional responses).

If you feel it is appropriate, and you feel comfortable, talk to the student in private when you are not rushed. If you do not feel comfortable, contact the **Student Wellness Centre at 905-525-9140 x27700** for suggestions. You may also want to refer the student to this service directly.

You feel harassed or intimidated by a student.

In any potentially dangerous situation (i.e. a student is behaving violently, threatening a member of the class, or carrying a weapon) immediately contact **Campus Security 905-525-9140 x24281** or dial **88** from any campus phone. You may also ask a student from the class to make this call if it is not possible for you to do so.

If a student is harassing you or another student, or if you feel discrimination is taking place, contact **Human Rights and Equity Services** at **905-525-9140 x27581** or **hres@mcmaster.ca**

Harassing emails should likewise be referred to Human Rights and Equity Services.

You suspect a student has plagiarized an assignment.

> In the case of suspected plagiarism or other academic misconduct, you are responsible for following the policies, procedures, and guidelines outlined in McMaster's Academic Integrity Policy found at http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf

☐ As defined by McMaster University, "Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage." This can include, but is not limited to: plagiarism (submitting somebody else's work as your own, failing to properly cite sources); submitting the same work in more than one course; using unauthorized aids during tests or exams (ie cheating); falsifying or forging documents; and helping another student to commit academic dishonesty.

Your course instructor has requested you mark an additional 25 papers: if you do so you will exceed your allotted 130 hours for the term.

☐

> If you are asked to perform duties not described in your Hours of Work form, or if your assigned duties will exceed your contracted hours, you and your employment supervisor should meet to make revisions to that form in order to ensure that you are not being asked to work unpaid overtime. As explained in Article 12.04 (a) of the Unit 1 Collective Agreement, "If, at any time during an assignment, either the employee or supervisor wishes to amend the allocation or number of hours on the *Hours of Work* Form, either party may request and will be granted a meeting for this purpose within 5 business days."
>
> If you and your employment supervisor are unable to resolve the problem, you should follow the protocol outlined in section **12.04 Hours of Work Adjustments /Additional Hours of Work** until the situation is resolved to your satisfaction.

Teaching in Tutorials

This section explains a typical tutorial session, suggests how to prepare for and lead an effective tutorial and suggests some responses to common questions and problems that may arise in tutorials.

A Typical Tutorial Session

It is misleading to say there is a "typical" tutorial session. What happens in your tutorial will depend on the kind of activities the course instructor would like you to carry out or supervise. What follows, then, are some common procedures and activities for a tutorial, but you may find that your tutorial runs differently.

Before the tutorial: Students

Before the tutorial students will read the assigned material for the week. They may also be required to complete online assessments, textbook problems, watch online videos or participate in online forum discussions before the tutorial. This material may be the same as that for the lecture or may be material unique to the tutorial. If your tutorials involve student-led presentations, demonstrations or discussions, the students may have met with you to discuss their activity.

Before the tutorial: TAs

It is very important that you are familiar with the materials the students have been assigned for the tutorials. Some courses with online components may require you to participate in those activities (quizzes, questions, readings or discussions). There may also be a quiz or problem set assigned during a tutorial that you should review ahead of time. Doing so will ensure that you are prepared to answer any questions the students may have about the material. If your tutorials take the form of a lecture, you may be required to prepare the lecture yourself or otherwise adapt materials assigned by the instructor to your students' needs.

During the tutorial

At the beginning of the tutorial session you may wish to make any important announcements and then introduce the tutorial agenda (i.e. what the class will cover in that session). If you are required to take attendance or track participation it is best to begin as soon as possible. Be sure to have a good strategy for tracking participation and be as consistent and thorough as you can during the tutorial. Depending on the tutorial, you may then lead the class through an instructional activity (see Chapter 7: Instructional Strategies) in order to clarify or introduce course material. This might include, but is not limited to: a large group discussion, a video clip, guided reading, small group discussions, a lecture, a debate, individual writing assignments, a student presentation, or a question/answer session.

After the tutorial

Students may have written assignments or reading to complete before the next tutorial. They may contact you by email or come to your office hours to discuss questions or concerns they have with the material or with an assignment. You may be responsible for collecting and grading student assignments.

> **Note**
>
> Student attendance in tutorials may be optional or it may be required. Attendance may factor in to participation grades. Be sure to check attendance policies and expectations with the course instructor. Help your students by making these policies and expectations explicit and consistent.

Strategies for Preparing for and Leading a Tutorial

Follow these five steps to effectively prepare for your tutorial:

1. Read the assigned material and make note of any difficult passages or concepts.

2. Determine what the key concepts or skills are that you will teach or discuss in the tutorial.

3. Prepare an explanation of difficult ideas or write down a question that relates to key concepts that you could use to start a discussion.

4. Write a lesson plan that includes what instructional activities you will use in the tutorial and how long each activity will take.

5. Arrive to your tutorial early to make sure you have all necessary materials ready.

Follow these five steps to effectively lead your tutorial:

1. Learn student names and use them to invite students to join the discussion or to give a response to a question. Name tags can help TAs and students to learn each others' names.

2. If possible, arrange the classroom furniture in a way that helps facilitate a discussion (i.e. a circle of chairs is more conducive to conversation than rows).

3. Begin each tutorial with a brief outline of what you will cover in that particular session. If you let students know what to expect they will likely relax and more freely participate.

4. If a student gives an incorrect answer to a question try to avoid telling them they are "wrong." Instead advise them the answer they have given is incorrect, but that you are interested in finding out how they arrived at that answer. This will encourage students to participate even if they are not sure whether their answer is "right" or not, because they know that you are interested in finding out their thought process, and not just the end result.

5. Aim to begin and end your tutorial on time.

Responses to Common Tutorial Situations

Students are not participating in the discussion

There are many reasons why students do not participate in discussions: they may not have read the assigned material; they may be unclear about what the question is asking and so are unsure of how to respond; they may be intimidated speaking in front of other students; or they may simply be distracted.

You can check at the beginning of the class to find out how many students have read the assigned reading by asking for a show of hands (if you are prepared to guarantee that you will not penalize students if they have not read the material). If most students have not read what you expected them to have read you may want to read a selection as a class, or ask the students as a group to create an alternate lesson plan that will make constructive use of their time. You may also ask them to read the assigned texts in class and submit a short summary or response at the end of class. You may also wish to review the expectations for the course in a discussion with students. [See "Students are not prepared for tutorial", below, for more strategies for addressing this problem.]

If the question you ask is unclear, students will have difficulty responding. See the section on Instructional Strategies for tips on asking a good question. If you feel you have written a clear question, ask your students if they simply need more time to think about their response, or if they would like you to rephrase the question.

Students who are intimidated by speaking in front of large groups may feel more comfortable speaking in a small group. You can break your class into smaller groups and have a short discussion and then rejoin as a large group and have one student from each small group "report" their findings. This gives students who were reluctant to speak the opportunity to express their ideas in a more comfortable setting, but still allows all students the benefit of the generated ideas.

One student dominates the discussion; or, the same student always answers the questions

The first way to approach this situation is to directly call on other students: the other students are likely interested in hearing from someone else, too. If this does not work, you can talk to the dominating student after class. Let them know that you appreciate their contributions, but that you would like to hear what the other students think about the topic, or that you need to assess what the other students know.

Students are not prepared for tutorial

Remind students of the expectations for the tutorial and the penalties for not coming prepared. If necessary, speak to the course instructor about introducing pop quizzes or an in-class assignment that will check that the students have read the material.

Note
If a question arises during the tutorial and you do not know the answer, you can respond, "Great question! I don't have the answer right now, but I will find out and email you by Monday," or "What an interesting question! How would you find the answer?" It is perfectly acceptable not to immediately know an answer, but it is important that an answer is found and discussed

Teaching in Labs

This section considers some of the unique skills and strategies used by teaching assistants working in the lab setting. It will describe a typical lab session, strategies for preparing for and leading a lab, and responses to common lab questions and situations.

A Typical Laboratory Session

Before the lab: Students
Before the lab takes place students will often complete a pre-lab exercise or read a lab manual (a book or a .pdf that details the theories and procedures necessary to complete the lab). You may assume that your students have read their lab manual, and some courses include a pre-lab quiz to ensure that this pre-lab work has been completed.

Before the lab: TAs
You should familiarise yourself with the procedure, equipment and theoretical knowledge needed for each lab. This is especially important as a new TA or if it is the first time assisting for a specific course. Not all programs are alike and new TAs may not have seen the identical lab in their undergraduate program. It is not uncommon for new TAs to be uncomfortable conducting certain labs. Thoroughly reading through the textbook and lab manual for the course can help you prepare. Consult with the course instructor, instructional assistant or lab coordinator if you have specific questions.

Beginning a lab
Before students begin work on the lab you will likely give a pre-lab talk, which should be short and concise. This talk might remind students of the steps of the lab and/or procedures they need to follow (e.g. where to dispose of waste). You may want to talk about what kinds of results you want recorded in their lab reports, and how to record them, so that marking expectations are clear. This is also a good opportunity to remind students of safety expectations and procedures and to answer any questions. Be prepared to point out any dangers involved in using the lab equipment or actions that may damage expensive technology. Students may then watch a video demonstration or watch you demonstrate any important laboratory skills they may be unfamiliar with (e.g. titration or palpating). It is also important to point out specific expectations pertaining to error analysis. Some labs require thorough error analysis while others require none at all. This can be a source of confusion for many students and can result in challenges with marking later on.

Conducting the lab
Students may then begin to complete the lab. During this time you will supervise their activities and answer any questions that may arise. If you can, try to circulate through the whole lab speaking to each student or small group. This will help build a collegial environment and may invite questions that a student was hesitant to raise with the whole class. Try to be conscious of the class's progress. It is sometimes difficult for students to complete labs within the designated time period. If you notice that students are having difficulties, be encouraging, offer

assistance and gently remind them of any hard deadlines that may exist for submitting reports at the end of the session.

After the lab
When the lab is finished students will usually complete a report or an assignment in order to demonstrate the knowledge they have gained by completing the lab. You may be responsible for collecting and marking these labs or this marking may fall to another TA. Be sure to find out marking procedures before the lab so that you can clearly communicate the expectations for the lab report/assignment.

Strategies for Preparing for and Leading a Lab

Follow these five steps to _prepare_ effectively for your lab:

1. Read the lab manual and relevant sections of the course textbook.

2. If you can, complete the lab yourself and note any difficult sections in your pre-lab talk. If one has not been provided, write a lab outline for you to follow.

3. Prepare your pre-lab talk. Be sure to include safety reminders and necessary definitions or calculations.

4. If a rubric or marking scheme has been provided, distribute this to the class. If one has not been developed, ask for clarification from the instructor or instructional assistant about how to convey expectations to students. Aim to be as clear and succinct as possible in your explanation.

5. Arrive at your lab early to make sure the necessary equipment is available.

Follow these five steps to _lead_ your lab effectively:

1. Start your lab on time and keep your pre-lab talk concise and ideally under ten minutes. Remind students of any hard deadlines at the end of the lab period and encourage them to stay on task.

2. Circulate throughout the lab addressing individual questions, correcting lab procedures and monitoring lab safety.

3. Try to talk to every individual and/or group at least once.

4. If more than one group is having difficulty with a particular aspect of the lab, clarify the problem for the whole class.

5. Ask questions like "What would you predict would happen?" or "Why did this happen this way?"

Responses to Common Lab Questions and Situations

Lab Equipment: How do you make it work? Is this right?
Check that the student has consulted the lab manual for directions or a diagram. Ask the student to clarify what part of the equipment or equipment set-up does not work or what specifically they are concerned with. In some cases, if timing is not a concern, it can be beneficial for students to disassemble and reassemble any apparatus that may be causing them difficulties. Building circuits, for example, can become complex and confusing and starting fresh can give students a clearer picture of what went wrong.

Lab Procedure: What should I do? Is this right?

Ensure that the student has read the lab manual. Invite the student to confer with their lab partner, and, if they still have difficulty, encourage them to consult their lab manual and to predict appropriate responses. If you suggested outcomes or highlighted important procedures in your pre-lab talk, remind the student of what you said earlier.

Lab Results: Why did it do that? Is this right?

Ask the student whether the results they have are what they expected, and, if not, to suggest at what point during the lab their results may have been compromised. Encourage your student to consider each part of the lab and its contribution to the final result. Remind of them of the theory behind their lab work. Chances are that the lab is connected to something that they have already learned. Linking lab work to lecture or tutorial material is a great way to reinforce what they have learned and clarify issues they may have with their results.

Lab Data and Calculations: Is it okay to be off? Is this right?

It is not okay to be "off" in your calculations. Some variation in data is to be expected, but calculations based on that data should be accurate. Ask your students where they are having difficulty with the calculations. To check whether the calculations are right, invite your student to consult with their lab partner, or to perform the calculation again. Calculations performed using data collected in the lab almost always require error calculations in order for the answer to be considered complete. If the answer is accurate *within error* then the student's answer is correct. If it is not within error of the expected result there are two possible reasons why this is the case. The calculations may be correct while the error calculations are not. Alternatively, the calculated value could be incorrect while the error calculation is fine. Always emphasize the importance of *reasonable* values.

> **Note**
>
> Try to avoid directly answering the question "Is this result right?" Instead, encourage your students to consider why and how something in the lab has happened or should happen and to assess whether their results or calculations align with their predictions. Invite them to collaborate with colleagues and to refer to their lab manuals. In response to "Am I doing this right?" you may assure students that they are performing the lab procedure correctly. You can even ask students to demonstrate why they think it is correct. This can help them feel more confident with the lab and ensure that they attain reasonable findings.

Discuss with your course instructor and fellow TAs what the procedures will be for dealing with students who do not read the lab manual before class, who request extensions, or who you suspect of academic dishonesty.

Beyond the Lab or Tutorial: Office Hours, Emails, Lesson Plans

Strategies for managing office hours and the volume of emails, and how to prepare an effective lesson plan

As a teaching assistant it is important to manage your time effectively. Your duties will often include activities like holding office hours, answering emails or preparing lessons plans. These activities are more difficult to schedule than class time, and can consume a great deal of your allotted 130 hours of work time. Monitor these hours closely by keeping a logbook – i.e. note how long you spend answering emails – and, if necessary, adjust your hours of work form with your course instructor to accurately reflect the time you spend on each task. The simple strategies here will help you succeed in effectively managing these activities.

Office Hours

When you complete your "Hours of Work" form you will determine, along with your course instructor, whether and how often you will hold office hours. The instructor may determine the time and location of your office hours, or you may decide for yourself.

Once you have determined where and when your office hours will be held, announce your office hours to your class, distribute a handout with your office location and hours, post them on your office door, post them with the Department office and send the hours out to your students by email (see Emails). You may need to occasionally adjust your hours or agree to meet students "by appointment" if there are students who cannot attend your scheduled hours due to a course conflict. Remind students of your office hours, especially in the first few weeks when new students may be joining the class.

Many students, especially in their first year, are not sure what office hours are, or why they might want to attend. Let students know that they do not need to have a "problem" in order to come to office hours, but may simply want to come to talk one-on-one about an idea or course concept. Remind them that you want to meet with them and that office hours are one of the few opportunities at the university level to have a one-on-one conversation. Also remind them that if they do have a "problem" you are interested in working together to reach a solution.

You may notice a sharp increase in office hour attendance immediately before and after an assignment is due. Advise students whether or not your office hours will be extended during these busier periods. Only extend your office hours if you have allotted the time to do so in your Hours of Work form.

Keep your office door open during your office hours. When a student arrives, greet them warmly and invite them to sit down. Once they are comfortable, ask them what brings them to your office. Listen carefully to their concern or question and respond appropriately. If you do not know an answer to a question, advise the student that you will find out and let them know.

Schedule your office hours in a location with frequent foot traffic and be sure to set your office hours during university business hours.

If you feel uncomfortable during your office hours for any reason, you may ask the student – politely – to leave. You can then schedule a meeting between you, the student, and the course instructor at a later date. If you feel threatened, call **Campus Security 905-525-9140 x24281** or dial **88** from a university phone.

These are some topics you may cover during your office hours:

Explanation of an assignment grade or grading criteria

Clarification of a course concept or research method

Discussion of professional development in your field (i.e. how can the student become a biologist?)

Discussion of the teaching methods used in tutorials

Conversations about the structure and format of an assignment

Discussion of thesis statements and essay outlines

These are some topics that are inappropriate for discussion in office hours:

Other students' work or behaviour

The course instructor(s), their teaching style, organization of the course, or their assignment schedule

The content/format of the exam (unless specifically directed by the course instructor)

Editing or proof-reading of upcoming assignments

These are some topics that are discretionary:

Your personal experiences related, or unrelated, to the subject matter

The student's personal experiences

Emails

Emailing students can take a lot of time. To save time and frustration set an email policy before the term begins. If you are unsure about your policy, check with the course instructor. Advise students of your email policy in the first class and distribute this policy on a handout.

Your email policy might include:

- When you will respond to emails: Advise students when you will check the course email (e.g. Tuesday and Thursday) and that they can expect a response from that point within two business days.

- When you will **not** respond to emails: You may decide not to respond to emails 24 hours *before* an assignment is due or 24 hours *after* an assignment is due in order to avoid last-minute or emotional emails. You **must** tell your students if this is your policy, and remind them well before the assignment is due and when the assignment is handed back.

- What kinds of questions you will respond to by email: You may advise students that only "yes or no" questions will be answered by email and that if they require a detailed response or discussion, they should come meet with you during your office hours. Or you can include a "five sentence rule" which states that you will only answer emails that can be responded to in fewer than five sentences.

- How you will protect the privacy of student email addresses: Assure your students that you will use the "Blind Carbon Copy" (BCC) function when sending group emails. This function ensures that only you see individual student email addresses.

- McMaster Addresses: McMaster University's communication policy stipulates that all academic correspondence must originate from a McMaster email account. Advise students that you will not respond to emails that originate from non-McMaster addresses (e.g. butterfly_friend@hotmail.com).

- How to communicate via Avenue to Learn: Many courses will be using Avenue to Learn to host online discussion forums related to the course. With the permission of the course instructor, you may want to set up a forum for students to ask questions or where you can post common questions that you have been asked in emails. This will help you reduce the number of emails you must respond to on the same topic.

Lesson Plans

As a teaching assistant, a lesson plan will help build your confidence before a class. A lesson plan can help you feel that you "know what you're doing," and can help you stay organized and focused during the session.

A lesson plan could have information about what the objectives are for your session, what teaching strategies you will use, the order in which you will cover the topics, or how you will assess whether the students have learned what you wanted them to learn.

A great way to save time is to use the same lesson plan format for each session you teach. This can be fairly straightforward if you teach in a lab setting. Your lesson plan might then look something like this:

Lab Session #3 – Titration

9:30 – Welcome and Pre-lab talk: mention office hours and upcoming quiz.

9:40 – Video demonstration of titration

9:45 – Students complete lab assignment

11:00 – Collect student lab reports and remind students of upcoming quiz.

If you teach a discussion-based tutorial group, your lesson plan might look more like this:

Objective for tutorial:

Ways to engage students:

How will I know if they "got it"?

9:30 – Welcome, attendance and reminder of upcoming assignment deadline

9:35 – Small group discussions: distribute questions to each group (use chart paper and markers)

9:50 – Large group discussion: each group reports on their question and discussion (record answers on board)

10:15 – Writing Activity: Students write down the three most important ideas from the day's session and one thing they are still unsure about.

10:15 – Answer unresolved questions, collect written responses, remind students of upcoming assignment.

If you lead a problem-solving tutorial group, your lesson plan might look something like this:

Problems to be covered:

Ways to engage students:

9:30 – Welcome, attendance, reminder of email policy and office hours

9:35 – Post problem #1 on overhead/slide/board. Brainstorm possible solutions.

9:45 – Ask students to write down the solution they think works best and to explain why they chose the one they did.

9:50-10:20 – Repeat with problem #2, #3

10:20 – Collect problems and remind students of what problems will be covered next week.

These lesson plans are intended as **models**. The way you structure your class and the activities you include will depend on the course, on the expectations of the instructor, and on the expectations of your students.

You may find that the instructor of the course has a standard lesson plan they would like all TAs to adhere to during their sessions. If this is the case, a lesson plan may simply be a set of questions or problems which you have prepared and feel best suit the topic of the session. In a lab, the lesson plan may consist of a list of topics you wish to discuss in your pre-lab talk or at a critical part of the procedure. Develop a plan that works well for you, but be prepared to modify it to meet student needs and learning styles. Remember that a lesson plan is only a guide and that productive conversations or engaging topics may sometimes warrant deviation from your plan.

Where do I get new ideas?

If you have been working as a teaching assistant for a few years, you may have an established method of running your tutorials or labs. To keep our work as teaching assistants engaging for the students and for ourselves, it can be helpful to seek out new teaching resources, strategies and ideas. If you are looking for new ideas, you might start by:

1. Attending a workshop, talk or event at the Centre for Leadership and Learning or in your department or faculty.
2. Accessing online or library resources on teaching and learning
   a. CLL's library and online list of Research on Teaching and Learning Resources: http://cll.mcmaster.ca/scholarship/resources/resources.html
   b. Other institutions' materials on specific topics (i.e. University of Toronto's writing resources, University of Guelph's resources on teaching and equity, Queen's Electrical and Computer Engineering Faculty wiki of Engineering Education Resources).
3. Ask to visit the class of a colleague whom you respect to observe their teaching
4. Ask students for feedback about what sorts of tutorial/lab teaching methods they have experienced and appreciated.

5. Talk to other TAs! Your colleagues can be a great resource for new ideas, teaching strategies, and supplemental material to use in tutorial.
6. Read! Follow leads from course materials by investigating topics that are only briefly mentioned in the course text. Review footnotes and references. These are often a goldmine of relevant materials and ideas you can incorporate into your teaching.

Evaluating Student Learning and Offering Effective Feedback

This chapter explores what qualities make feedback effective, then offers suggestions for how to quickly and fairly evaluate essays, presentations, labs and assignments.

M ost teaching assistants are also students, and have likely experienced the aggravation of receiving an assignment back weeks (or even months) after you handed it in, the frustration of not understanding the feedback you were given, or even the shock of finding no comments at all, when you had been expecting them. This chapter will consider some of the ways you can avoid repeating these mistakes and, moreover, how you can provide your students with quality feedback that will help them achieve better results on their next assignment. See Appendix B for further details on the qualities of constructive feedback.

McMaster Grading Scale

McMaster University operates under a 12-point grade scale. You may be required to give grades as a percentage out of 100 or as a letter grade. Check with your course instructor before you begin grading to ensure that you are using the preferred method. Use this chart if you need to convert percentage grades to letter grades (or to check how the percentage or letter converts to a grade point):

Grade	Equivalent Grade Point	Equivanlent Percentage
A+	12	90-100
A	11	85-89
A-	10	80-84
B+	9	77-79
B	8	73-76
B-	7	70-72
C+	6	67-69
C	5	63-66
C-	4	60-62
D+	3	57-59
D	2	53-56
D-	1	50-52
F	0	0-49 - Failure

The Qualities of Effective Feedback

1. **Prompt**: If you want your feedback to feel relevant to your students you need to provide it as soon as possible. Ideally an assignment should be handed back within two weeks of submission. Providing students with quick feedback gives them time to think about your suggestions and talk to you about them before they begin working on their next assignment, while also giving you or other members of the teaching team ample opportunity to teach skills or techniques you have identified as needing improvement.

2. **Specific**: Whether making a suggestion for further work or praising a student's accomplishment, feedback should be specific. If you tell a student that an assignment is "good" or "bad", they will likely be unsure about what exactly they have done well or poorly. In contrast, by specifying what *specifically* they have done the student will either know what to correct or continue doing in their next assignment.

3. **Constructive (or Future Oriented)**: There is nothing wrong with advising students that they have completed an assignment incorrectly or misused a formula or theory. However, when you alert students to a mistake it is important to let them know what they should do differently next time, or what steps they can take between this assignment and the next one, if they want to achieve a better result.

4. **Objective/Consistent**: To ensure that you are not biased or inconsistent when marking student assignments, you can ask students to use their student number, rather than their name, to identify their work. You can also ask them to write their name on the *back* of the assignment (this will save you the time of looking up student numbers and names). Describing what was done (or not done) rather than *why* the student did it is another important aspect of objectivity. Likewise feedback that focuses on what the "assignment did" or the "essay did not do" rather than what "you did" or what "the student did not do" will help prevent defensive reactions from students.

   To ensure consistency, compare evaluations performed on different days: for example, did you give an 'A' to a paper on Monday that is comparable to a paper you gave a 'B' on Thursday? Determine a system in your grading to establish and maintain a consistent approach to evaluation.

5. **Relevant and Useful**: Some assignments you mark will have dozens of things "wrong". It is important to focus on one or two things the student needs to work on immediately, rather than cataloguing every error. This is important both because you do not have the time to give detailed and constructive feedback on all the errors, and because your student may feel overwhelmed if you list everything. Similarly, make sure you are evaluating the aspects of the assignment that you told students you would be marking. If you told your students you would not be marking their use of citations, then feedback on their citations is irrelevant (for that assignment).

Grading Quickly and Fairly

Now that you know what qualities make feedback effective it is worth considering *how* to give this feedback quickly and fairly.

1. **Use a rubric or sample assignment**: If your instructor is agreeable and your contracted time allows, you can use a rubric for grading. Your instructor may provide one or you might create it yourself. A rubric lists the portion of the total grade assigned to each component of an assignment; add up the marks you give each section to find the final grade (see **Appendix A** for sample rubrics

for marking an essay or presentation). You can also use a sample assignment to explain your expectations by demonstrating how various components of the sample meet assignment criteria. Distribute the rubric or sample assignment to your students *before* the assignment is due so they know your expectations. Using a rubric or sample assignment may make it easier to explain why students received the mark they did as you can clearly show them the parts of the assignment they had trouble with or did well on. Finally, such tools can help to ensure consistent grading.

2. **Part Marks**: Your rubric or sample assignment may detail what you will give marks for, but it may not clearly explain under what conditions you will give "part marks." Consider this before you begin marking, and assign "part marks" consistently.

3. **Group Assignments or Questions**: If you are marking essays, group them according to topic. Mark all of one topic at one time. While you may get bored after reading your 20th paper on the French Revolution, you will mark more consistently by marking in this way. Likewise, if you are grading a problem set, group assignments by *how* the student solved the problem. This will help save you time and will also ensure that you grade the problems fairly as you will more likely remember under what conditions you gave out part marks or deducted marks. You may also be more likely to detect academic dishonesty by grouping assignments and problem sets.

4. **Use 'sign-post' assignments**: After a quick look through your stack of marking, pull out three or four that seem to represent the span of potential grades. Having marked these, you can use them to remind yourself what a C or A paper looks like and to ensure internal consistency. Some TAs also pile all A, B, C, D and F assignments into separate stacks to allow for easier comparison.

5. **Class Feedback**: If more than three students have made a similar error, you might stop writing specific feedback and simply note that you will discuss the problem in class. When you address the class point out that the error was common and give detailed instructions on how to improve for next time. If you are working as a marker, consult with the instructor about using a similar system, giving students a list of frequently encountered challenges or errors.

6. **Use a timer**: Depending how many of your 130 hours/term have been allotted to marking, you may find you need to mark very quickly. You can use a timer to ensure that you give items equal time without going overtime. If the timer goes off and you have not finished, you might stop writing feedback and work as quickly as you can to reach the end of the assignment and assign a grade. This method can help you to gauge the amount of feedback it is possible to give for each assignment and gradually increase the pace at which you work. If you cannot provide feedback to students in the time allotted be sure to discuss this concern promptly with the course instructor.

7. **Practice**: You will become more comfortable marking and giving feedback as you gain experience. If you are nervous or unsure about your first round of marking – and most TAs are! – ask your course instructor or head TA to review some of your marking and offer *you* some feedback. Many course instructors request a sample of marking to ensure consistency across TA sections. This is normal practice and will help you feel confident in the fairness of your grading. If you are a first time TA you may want to mark with a partner for the first round of assignments. This will give you the chance to ask questions and seek advice. Be sure that you do not spend your time complaining about the poor quality of student work: this is unprofessional, inappropriate and time consuming.

Instructional Strategies

This chapter describes common instructional strategies and how to use them in your tutorial or lab. You may incorporate all of these techniques in your teaching or find one or two that work well for you. Don't be afraid to take a chance and try something new!

Discussions

There are many ways to hold a discussion and many reasons for wanting to do so. Discussions generate more ideas than one person could come up with alone, and they offer students the chance to test out new ideas in an informal setting. Discussions have also been shown to help students *retain* information and ideas far better than lectures or demonstrations because they require students to analyze ideas and phrase them in their own words.

Small Group Discussions

The size of a "small group" may vary, but they generally consist of between three to eight people. There are many ways to structure small group discussion. You can: have each small group work on a different problem/question and then report its findings; have each group work on the same problem/question with no chance to report back; or have each small group generate a list of questions/problems for the large group to solve together. You can ask groups to elect a "recorder" who will write down the group's key ideas, a "speaker" who will report findings to the class, and even a "time keeper" to make sure the group completes its task in the given time. Assigning roles is an excellent way to keep all group members engaged in the discussion.

Think-Pair-Share

This technique consists of three steps that can be used alone or together. The first step is to present students with a question or problem and let them **think** independently about the question/problem for a set period of time (say 2 minutes). The next step is to have the students **pair** up, turning to the person beside them and discussing their ideas for a set period of time (say 3 minutes). The final step is to return to the large group to **share** responses in an informal discussion where students volunteer ideas or by taking turns reporting their responses. This technique is especially effective when discussing concepts in science tutorials and can help students retain conceptual information better than simply writing down the solution to a problem on the board.

Large Group Discussions

There are many ways to start a large group discussion with your tutorial or lab group. You could show a video clip, read a passage from the assigned text, present a problem, share a newspaper clipping, or do a demonstration and then have your students discuss the significance of what you showed or read, sparking discussion by asking questions about the material. You could also start the discussion by asking (and writing down on the board) a question that you came up with or you could have students generate questions to share with the whole group.
*Note: You could use any of these techniques for beginning a small group discussion, too. In order to encourage

a large group discussion, you may want to prepare a series of questions to ask during the session. If it is appropriate, you may also want to divide the class into large groups to conduct a debate.

Questions

Asking a good question can start a great discussion with a large group, a small group, or a think-pair-share group. There are four qualities of a good question. A good question should be **high level**, **divergent**, **structured**, and **single**.

High Level questions require analysis, synthesis or evaluation, whereas "low level" questions require only rote memory. **Divergent** questions have more than one right answer and so students feel safer offering a response. **Structured** questions give students a clear sense of how to answer the question. For instance a structured question asks students to think about a specific section of the text, or to answer with specific information. This helps student focus and arrive at an answer quickly. **Single** questions are questions that ask one question. Often teachers will ask a string of questions in a row which makes it difficult for students to decide what question to answer first. If you ask one question at a time students will know exactly what they should be responding to. See **Appendix B** for examples of high level, divergent, structured and single questions.

Brainstorming

Present a problem or question to a group of students. Have them generate as many ideas as they can in a set period of time (say 5 minutes) and list these ideas on a sheet of paper or on the board. After they have "brainstormed," have students evaluate which answers are most likely correct and ask them to explain why.

Common Concerns About Using Discussions

Common concerns about using discussions include: silence; the discussion drifting from the topic; one student dominating; inappropriate or incorrect responses; not having enough time to cover the material. To prevent and deal with these concerns keep in mind these three words: **question, direction, rephrase.** If you ask a good **question** you are less likely to encounter silence. If students do not respond to a good question, ask if they need it rephrased and be sure to give them enough time to think about their answer. Provide **direction** in the discussion by telling students why you are having the discussion and feel free to stop them at any point if you need to **redirect** their focus. If students give an incorrect or partial response you can **rephrase** what they have said more clearly/accurately. If a student dominates the conversation you can **rephrase** what they have said and ask for another student to comment on the idea

> ### Top Three Tips for Using Discussions
> 1. After asking a question, wait at least 30 seconds – in silence – for students to respond. Do not fear silence: it can be productive! Students will need time to think about your question and to generate an answer.
>
> 2. Let students know what question or topic you will be discussing the next week. This will give them the chance to think about the topic ahead of time. You can also ask students to write their own questions about the topic and use these student-generated questions to get the discussion going.
>
> 3. Set up ground-rules for the discussion before you begin: what does a respectful discussion involve? What will happen if someone makes an inappropriate comment? How do students indicate they have a comment? Will you call on your students individually?

Participatory Learning

The following techniques invite student participation. You do not need to use a "game" to actively involve students (though games can work well). Research suggests that when students "actively" participate in the tutorial or lab they are more likely to retain and synthesize the information in a personally meaningful way.

- **Panels**: Invite several students to present their views on a topic to the class as "expert panellists." Give these students time to prepare for their panel appearance and invite the class to prepare questions to ask the experts.

- **Debates**: Select a controversial topic in your field, create a debate question, and assign students to defend different sides, with you as moderator. Give students time to work together to prepare their defense. Have students write a response about which side persuaded them and why.

- **Games**: You can model games on popular television programs (like Jeopardy or Family Feud) as a way of stimulating participation. These games work well as test or exam review. Be sure to prepare students by explaining what they will have to do during the game and why you are using the game.

- **Learning Partners**: Set students up at the beginning of the year with a "learning partner" or change learning partners throughout the term. Students can work with their partner on a number of tasks including: critiquing and editing written work; discussing a text; interviewing one another on their reaction to a lecture/reading; asking and answering questions about the assigned material; recapping lessons together; testing one another; comparing notes; responding to questions (think-pair-share).

- **Case Study**: Present a real-life example of one of the problems or issues in the course material. Write questions about the case study for students to answer, or have students "solve" the case study. Case studies can be solved or responded to individually or in groups.

- **Problem Sets**: Post on the board several problems from the lecture or from an assignment. Solve the problem yourself or ask students to suggest ways to answer the question. Discuss other ways to solve the problem and ask students to evaluate which approach to solving the problem is best and why.

- **Question and Answer:** Ask students to write down one or two questions they have about the course material or a particular topic. Collect their written responses and then drop them into a bag or hat. Randomly select a question, pose it to the class, and work as a group to find an answer.

- **Shared Experience**: Read an excerpt from the course readings, show a video clip, post an article from a popular media source or from an academic source, perform a demonstration or have student complete the same activity. Use the shared experience to generate discussion, stimulate questions or have students write a response. Shared experiences are terrific if you find students often come to class unprepared as everyone can participate.

These are just some of the instructional strategies you can use in your tutorial or lab. If you are a new TA find one or two strategies that you are comfortable with and use them frequently. If you have used the same couple of techniques all term, try a new technique and see what happens. If you are an experienced TA you may want to try new techniques to keep yourself interested in the material and to generate new ideas from your students. For ideas and instructions for implementing these strategies, draw on the staff and resources at the Centre for Leadership in Learning.

Lectures

If you need to prepare a short lecture or explanation of a topic for your tutorial or lab group (i.e. a pre-lab talk or a summary of course material) begin by deciding what specifically you want to explain. To figure out the key idea you want to get across ask yourself "What is the one thing I want my students to understand about this topic?" Then decide what points you need to explain so that students will understand your key idea.

Try structuring your lecture by splitting it up into an introduction, a main section where you present your key points, and a final summary.

Your introduction should get the attention of your class: why is this topic important for them to understand? How will they use what they learn in the lecture?

To explain your key points begin with one sentence that encapsulates that point (i.e. "The essential point is…." or "Put simply…"). Then choose one or two examples or illustrations of the point you are addressing. Explain the example and elaborate on its significance. Summarize the key point.

Your summary should bring together the points you have made and should allow you to address the key question or point you identified for the lecture. Do not skip the summary!

Feedback: Give students the chance to respond before, during and/or after your lecture. Let students know if you welcome questions during the lecture or whether they should save their questions until the end. At the end of the lecture have students write their own summary of what you discussed or a question they still have about the material. Collect these responses or questions and read them to determine whether your students understood your key message or whether you need to repeat the information in the next class.

Reflection and Student Response

Student response and reflection is a great instructional technique because it requires little preparation and because it gives you an opportunity to evaluate your students' understanding of the material.

Activities that allow for student response and reflection include:

- Response Cards: Have students write answers to questions (or their own questions) on index cards. The cards require concise answers and offer the chance for students to respond anonymously.

- One Minute Paper: Students spend one minute explaining the key idea of the discussion or lecture or writing a question they still have about the material.

- Sample test or exam question: Prepare a question that might be on a test or exam. Explain to students that this sample question offers a chance for them to practice writing under pressure. Collect their answers and either mark them yourself or redistribute them and take up the answers as a group.

Instructional Aids

You may want to use any number of instructional aids, including, but not limited to, blackboards, whiteboards, SmartBoards, DVD or VCR players, overhead transparencies, PowerPoint or Prezi presentations, and data projection (internet video clips or websites).

You will want to practice using the equipment before your class. If you have never used a data projector before, or would like practice, contact <u>Classroom Audio Video Services</u> (see Chapter 10: Resources).

Check to make sure your writing is clear by writing something on the board and then walking to the back of the room to see if you can read it. It is always a good idea to provide any important information that you write on the board on a large print handout as well. Also, be sure to read aloud important information posted on the board.

Ask students to tell you if they are having difficulty reading any of the information you present and express your willingness to make the material accessible in other formats if necessary.

If your course uses Avenue to Learn, you may opt to put a copy of any transparencies or slides that you use online for students to access.

Working With Technology
Many students will bring laptops to class, and they will all have access to computers either at home or at the campus library. Use these resources to your advantage! Here are ways to incorporate technology into your teaching:

- Show a relevant website or video clip to start a discussion;

- Create a YouTube video as a class related to a course topic;

- Suggest that students tweet responses to course readings using Twitter;

- Moderate discussion groups on Avenue to Learn;

- Have students create a Facebook profile for an important theorist or author in your field;

- Introduce students to document sharing and collaborating tools (i.e. Google Docs or Microsoft Office Web Apps); invite them to collaborate on an assignment while you moderate their collaboration.

- Discuss plagiarism and show examples of how to properly cite information gathered from online sources.

Note on Technology in the Classroom
In your first tutorial or lab explain to students your policies on cell-phones, mp3 players, laptops and other technology. As a TA, one of your goals is to support the creation of a respectful environment where students can focus on learning. For this reason, all non-course-related use of technology should be eliminated or minimized to the point that it is not intrusive. The ringing of a cell-phone, the tinny beat of music from a neighbour's ear buds, and the flickering graphics of a video game or social media site can be very distracting and disruptive in class. You might, for example, explain to your students that laptop courtesy means using laptops for note-taking only, and not for entertainment. Phones can be set to vibrate and kept on only when expecting an important call (i.e. from a babysitter or about a time-sensitive, urgent matter) and students should leave the room before answering. In this way, technology can be present in the classroom to the extent that it is helpful to learning and supports students' needs rather than their desire for entertainment or social contact.

Evaluating Your Teaching

This chapter gives you some ideas for how to get feedback from your students about your teaching style and techniques. It also suggests what to do with the feedback when you get it and how to introduce changes to your teaching mid-course.

Feedback from Students

Getting feedback from your students is the best way to find out how your teaching is working in your classroom. You can respond to feedback by adjusting your teaching methods, or by explaining to students why you will **not** be making any changes (perhaps your students suggested "no more take-home assignments" and you need to explain why take-home assignments are necessary). Asking students to respond to your teaching methods and style at a couple of different points in the term is terrific for your students: if they have a problem or concern you can actually make changes to help them before the end of term, when feedback will be too late to make a difference for that group. It is also great for you as a teacher. When students feel that you are listening and responding to their concerns you will likely have an easier time engaging them in class.

There is a variety of ways that you can solicit feedback using less than five minutes of class time (and then one or two minutes to explain your response to the feedback in the next week).

One Minute Paper
Students respond in "one minute" to these two questions:

1. What was the most important thing you learned during this class?

2. What important question remains unanswered?

When you read the answers students provide to these questions you will know whether students understood the "main idea" you tried to teach in that session or whether you need to review the concept again in the next class.

There are a couple of variations on the "One Minute Paper." You could, for instance, ask a question like "What idea do you still want to discuss?" or "What activity did you like best today?"

You do not necessarily need to respond directly to the responses to the "One Minute Paper" except to say "A number of students had questions about X – I will take a few minutes now to go over that topic."

Critical Incident Questionnaire
This set of five questions is slightly more involved than the "one minute paper", but should still only take three or four minutes for students to complete.

The questions are:

1. At what moment in the class this week did you feel most engaged with what was happening?

2. At what moment in the class this week did you feel most distanced from what was happening?

3. What action that someone (teacher or student) took in class this week did you find most affirming and helpful?

4. What action that someone (teacher or student) took in class this week did you find most puzzling or confusing?

5. What about the class this week surprised you the most?

For students, every class has moments that feel significant. These questions help you find out what students felt to be significant, and what actions contributed to students feeling engaged or disengaged. You can then repeat actions that led to engagement and discontinue actions that led to disengagement.

This set of questions is also helpful in identifying potential conflicts. If a student notes that their lab partner keeps doing things that disrupt their learning, or that the group they worked with did not focus on the assigned question, you can intervene early to prevent a larger problem.

Mid-Term Questionnaires

You can submit a short questionnaire half-way through term that includes questions about your teaching activities and style as well as the course content. You can develop a questionnaire yourself, or ask your course instructor for a questionnaire to use. Questionnaires work well because they allow students to give anonymous feedback. You can then follow up with responses in class. For a sample feedback forms, see Appendix B.

TA Evaluation Forms

Some departments offer TA evaluation forms to use at the end of term to measure students' satisfaction with your teaching throughout the course. These forms are an excellent way to receive feedback on your teaching but also make a great resource for your teaching portfolio. If you are planning to pursue a career in teaching, having positive student testimonials can greatly enhance your professional profile.

Self and Peer Evaluation

You know yourself best. Take a few minutes after each tutorial to ask yourself what you think the best part of the tutorial or lab was, and what part you felt least comfortable with. Spend some time with a colleague or by yourself brainstorming ways to improve or alter the parts of your class that did not go as well as you would like.

You can also ask colleagues or a member of the **Teaching Assistant Network (email: tanet@mcmaster.ca)** to come and observe one of your classes. This *informal* assessment can be a terrific way to get a sense of what is working well in your class and what you could improve. Asking a colleague (and not, for instance, the course instructor) may help you feel less intimidated or nervous, but can still provide the feedback you need.

Changing Techniques Mid-Course

If you receive feedback from students, or you notice yourself, that a particular teaching technique is not working you **can change** what you do and how you do it.

Let your students know you will be making a change and why you are making it.

If you would like to change a course assignment (i.e. the student led presentations are not working out) meet with the course instructor to discuss how you can acknowledge the work already done by some students, while addressing the reality that the assignment is not leading to student engagement or learning. You may have to continue with the course assignment if the instructor is not willing to adjust the assignments. If this is the case, let your students know why you are continuing with an unpopular assignment and then brainstorm as a class ways to make the assignment more meaningful.

The First Tutorial or Lab

Like many teaching assistants, you may have concerns or anxieties about your first tutorial of the term. Read this chapter for tips on how to prepare for and run a terrific first tutorial.

Preparing for your first tutorial or lab

Meet with Course Instructor

Before your first tutorial or lab you will meet with your course instructor to complete your Hours of Work form. At this meeting, you may also want to ask some of the following questions:

☐ What kinds of students take this class (background with subject, level, etc.)?

☐ What are the course goals/objectives?

☐ Will the course be using Avenue to Learn or other web-based platforms? Who will maintain this?

☐ What should I do if I suspect a student has committed academic dishonesty?

☐ Do I structure my own labs/tutorials or are there outlines I will follow?

☐ What should I do if I am unable to attend a class/lab/tutorial?

☐ Is student attendance in tutorials/labs mandatory? What are the penalties for late assignments?

☐ Am I permitted to grant students extensions?

☐ How do I get audiovisual equipment if I need to use it?

☐ Will you be evaluating my teaching? When?

☐ How do I get in contact with you if I have a question or concern?

Prepare a Tutorial or Lab Syllabus/Handout

This handout does not need to be long, but it should provide students with important information like how to contact you and details of your tutorial policies.

You should include on your handout:

The name and date of the course;

Your office number, office hours, and email address;

The location and hours of the tutorial or lab.

You may want to include:

Tutorial/lab assignments, due dates and grade distribution;

Tutorial/lab materials (books, lab jacket, calculator, etc.);

Your email policy;

Your late assignment policy;

Your attendance and participation expectations.

McMaster's definition of plagiarism: McMaster University defines plagiarism as to "submit academic work that has been, entirely or in part, copied from or written by another person without proper acknowledgement, or, for which previous credit has been obtained" (s.18.a) *Academic Integrity Policy*. See also s.2 of Appendix 3). You should also provide a link to the full text of McMaster's Academic Integrity Policy, available at: http://mcmaster.ca/academicintegrity/index.html

Other Materials to Collect/Prepare
Pick up your class **attendance sheets** from your Department administrator.

Collect the course materials (textbooks, lab manuals) from your Department administrator or the course instructor.

Prepare a lesson plan for the first tutorial.

Other Suggestions
Find your classroom before the day of your tutorial and time the trip from your home/office.

Checklist of things to bring to your First Tutorial
→ The course syllabus and your tutorial syllabus/handout
→ Lesson plan for first tutorial
→ Class list/attendance sheets
→ The course textbook
→ Pen/pencil/overhead pen/chalk; a bottle of water

Preparing a Lesson Plan for Your First Tutorial or Lab

Some TAs decide to have a "short" first tutorial or lab, but it is recommended that you use all of your class time during the first session. It is important to show your students that you are excited about the material and that they will be expected to work when they come to the tutorial or lab. There are a few things you may want to *do* during your first tutorial or lab. You can decide for yourself which activities to include.

Introduce Yourself

How do you want students to address you? What is your background in the course material? What section of the course are you most excited about? How can students get in contact with you?

It is a great idea to arrive early to your first tutorial to give yourself time to write any important information on the board/post an overhead or slide. It can also be helpful to arrive early so that you can spend some time speaking with your students informally; ask them about their weekend or summer; or find out what movies they like to watch. This informal time before class lets students know that you are approachable and interested in them as people. It can also be very helpful in learning their names.

Introduce the Course and Lab/Tutorial

Why is the course topic relevant to the whole discipline? How will this course help the students? What will students be expected to do in the tutorial or lab? What will you as a TA be doing in the tutorial or lab?

Introduce the Students

How many students are in their first year? How many students have taken a course in this subject before? What are the students' goals for the course?

If you do not want to have each student respond individually you could ask students to fill out a brief questionnaire that answers these questions so that you know what kind of experiences your students have had with the material and what their expectations are for the course. It is very important to **learn students' names**. You may want to include a short activity that helps you learn the names of your students (i.e. have your students introduce themselves and tell you something interesting and memorable about themselves). Teaching Assistants often ask students to put up name cards on their desks to assist with learning and recalling names; this also helps students to learn one another's names.

Introduce Classroom Etiquette

Discuss as a group the guidelines for class behaviour (see: Chapter 4: Teaching in an Inclusive and Civil Classroom) and review any important tutorial or lab policies (safety, attendance, etc.)

Complete an Activity or Introduce a Topic

- Bring a short, relevant reading for students to read in class and discuss as a group;

- Demonstrate one of the skills the students will learn during the course;

- Review important concepts that students will need to know for the next lecture;

Clothing Note

What you wear to your tutorial or lab is your decision. As it does in many other areas of your life, how you dress will contribute to the tone you set. If you want a more formal class, you may want to dress more formally. Likewise, a more casual class can be signalled by what you wear. Ultimately you should feel comfortable. TAs working in labs may have specific guidelines for safe clothing. Generally, lab safety guidelines require you to wear closed-toe footwear and full-length pants, avoid loose clothing and jewellery and tie back long hair. Consult with your instructor or lab coordinator with any specific concerns about clothing in your lab. You can also consult the Laboratory Safety Handbook which contains more detailed information and can be found on the EOHSS website at http://www.workingatmcmaster.ca/eohss/index.php
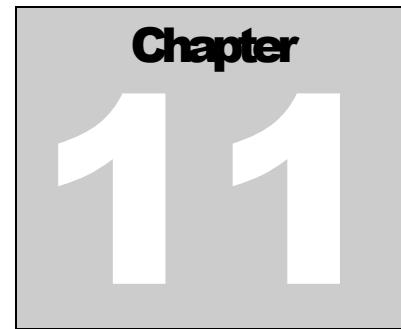
Resources and Acknowledgements

Campus Resources

Health and safety:
Security Services http://security.mcmaster.ca/
In case of emergency when on campus, call Campus Security Services by dialling **'88'** from any university phone or calling 905-522-4135. You can also call 905-525-9140 x 24281, or press the 'security' button on any on-campus pay phone. There are direct lines to Campus Security in every elevator and 'Red Rocket' emergency phones located across the campus.

Environmental and Occupational Health Support Services http://www.workingatmcmaster.ca/eohss/index.php
EOHSS is a team of health, safety and risk management specialists working in the areas of environmental and occupational health, safety, loss prevention and mitigation. Providing professional and technical support to stakeholders across the University community, EOHSS provides support services and leadership to assist in the continued development and maintenance of an effective Internal Responsibility System.

Teaching / Employment Support:
Academic Integrity Website http://mcmaster.ca/academicintegrity/index.html
This website provides information for students and instructors alike to help them work with integrity and to help avoid problems with dishonesty.The Centre for Leadership in Learning http://cll.mcmaster.ca
The Centre for Leadership in Learning offers assistance to enhance your teaching. You can meet with an Educational Consultant or the Teaching Assistant Network Coordinator to discuss ideas to improve your teaching or you can consult the extensive library of books, articles and newsletters on teaching and learning. The Centre for Leadership in Learning also runs **Education 750: Principles and Practices of Higher Education**, a graduate level course that will introduce you to the practices and scholarship of teaching in higher education. The Centre for Leadership in Learning is located on the fifth floor of Mills Library; you can also call 905 525 9140 x24540.

CUPE 3906 http://www.cupe3906.org
CUPE 3906 is the union representing McMaster teaching and research assistants (both graduate and undergraduate). You receive benefits from CUPE 3906 and can contact their office if you have questions about your workplace conditions. You can also get involved with CUPE 3906 by contacting their office at 905 525 9140 x24003 or email cupe3906@mcmaster.ca or dropping by Wentworth House B108.

The Teaching Assistant Network http://wiki.mcmaster.ca/TAN or email tanet@mcmaster.ca
You can be a member of the Teaching Assistant Network! The TA Network (or TAN) is made up of interested teaching assistants from all Departments on campus. You can get involved or find out more information by contacting the Teaching Assistant Coordinator at tanet@mcmaster.ca

Student support

English as a Second Language Support http://studentsuccess.mcmaster.ca/
Support for students whose second language is English is offered through the Student Success Centre. They provide evening ESL classes, the Speakeasy Program (one-on-one support from a volunteer student) and Conversation Circle (group-based support) to help students practice conversational English, learn idioms, vocabulary and about Canadian culture. The classes are free and have continuous enrollment.

Graduate Students Association http://www.mcmaster.ca/gsa
The Graduate Students Association represents graduate students on campus. They administer health benefits and organize events for graduate students. You can get involved with the GSA by contacting their office at 905 525 9140 x22043 or dropping by Wentworth House 109A.

International Student Services http://oisa.mcmaster.ca
The International Student Services Office provides services and programs for international students, visiting scholars, post-doctoral fellows and faculty and their families. The Office is located in Gilmour Hall, Room 104 or you can email iss@mcmaster.ca or call 905 525 9140 x 24748

Student Accessibility Services http://sas.mcmaster.ca
Student Accessibility Services offers various supports for students with disabilities. SAS provides or assists students with academic and disability-related needs by providing Learning Strategies; Assistive Technologies; Test & Exam Administration; Note Taking Programs; Classroom Accommodations; Groups and Events

Student Success Centre http://studentsuccess.mcmaster.ca/
The Student Success Centre offers support to students from time of offer and admission, throughout their studies, and until five years after graduation in the areas of student orientation, leadership, service-learning, volunteerism, educational planning, employment and career transition.

Student Wellness Centre wellness.mcmaster.ca
The new **Student Wellness Centre** aims to support your personal and professional success, providing Personal and Psychological Counselling, Mental Health Support; Medical and Health Services; and Wellness Education.

Building an Accessible, Inclusive Campus Community

Accessibility at McMaster http://www.mcmaster.ca/accessibility
The Accessibility at McMaster page can provide you with online training in building an inclusive classroom and campus community [see also Student Accessibility Services, under Campus Student Support].

Human Rights and Equity Services http://www.mcmaster.ca/hres
Human Rights and Equity Services promotes an environment free from sexism, racism, heterosexism, discrimination against people with disabilities and all other forms of harassment and discrimination. The office receives enquiries and complaints concerning any form of harassment or discrimination, and attempts to reach confidential resolutions. HRES also posts a current list of Religious Holidays, useful when determining accommodations for students. Their office is located in the Student Centre Room 212 and can be reached by emailing hres@mcmaster.ca or calling 905 525 9140 x 27581

Ombuds Office http://www.mcmaster.ca/ombuds
The Ombuds Office provides impartial, independent and informal dispute-resolution advice and assistance to all members of the McMaster community. The Ombuds Office is located in the Student Centre Room 210 or you can email ombuds@mcmaster.ca or call 905 525 9140 x 24151

Ontario Public Research Interest Group at McMaster Anti-Oppression Resources http://opirg.ca/ao/

This is a useful resource for anyone interested in learning more about oppression (including racism, sexual orientation, classism, disability, religion and ageism) and offers ideas of how to interrupt oppression and become an ally in the struggle for equity and the creation of a positive space. They also offer quizzes to build your knowledge about how oppression functions.

President's Advisory Committee on Building an Inclusive Community (PACBIC)
http://www.mcmaster.ca/pacbic/index.html

This committee is made up of stakeholders from many parts of McMaster's campus, and has the mandate of: identifying and anticipating issues affecting equity-seeking communities within, and seeking access to, McMaster University; learning and discussing ways to address these issues; and providing advice to the President on such issues. For more information, consult the PACBIC website or email them at pacbic@mcmaster.ca

Student Conduct http://studentconduct.mcmaster.ca/

The Office of Student Conduct contributes to the University's efforts to create and enhance the ethical environment of the campus community by addressing behavioural expectations for student civility and personal conduct. The Student Code of Conduct, posted at the website listed above, outlines students' rights and responsibilities in the shared quest to create a safe, inclusive, fair environment at McMaster, and one that is conducive to learning.

Queer Students Community Centre http://www.msumcmaster.ca/qscc.htm

Run by the McMaster Students Union, the QSCC describes itself as "A Place For Gender and Sexual Diversity at McMaster." It offers a contact point for McMaster students that may identify as gay, lesbian, bisexual, trans, or queer, and their allies, and offers educational programming and access to resources of interest to the GLBTQ community. The QSCC is located in MUSC 221. You can reach the coordinator at 905- 525-9140 ex 27397 or by email at qscc@msu.mcmaster.ca

Indigenous Studies Program/Aboriginal Student Support http://www.mcmaster.ca/indigenous

The Indigenous Studies Program offers a number of services to the Aboriginal community at McMaster University. The services include student counselling, writing skills workshops, and an Elder-in-Residence program. To learn more about Student Services in the Indigenous Studies Program, visit their website for more details.

Technical / material resources

Campus Bookstore: http://titles.mcmaster.ca

Classroom Audio Visual Services http://library.mcmaster.ca/cavs

If you need to book a data projector or need help using the equipment in your classroom, you can contact Classroom Audio Visual Services for help. They are located in Mills Memorial Library, L305 or you can email equipbkg@mcmaster.ca or call 905 525 9140 x 22761

McMaster Libraries http://library.mcmaster.ca

University Technology Services http://www.mcmaster.ca/uts

UTS administers campus emails, wireless, MUGSI, SOLAR, student technology labs and technology help desks. They are located in Burke Science Building, 245. You can contact them at uts@mcmaster.ca or by calling 905 525 9140 x 24357 (2HELP).

Online Teaching Resources

Checklist for Instructor Meeting (University of Waterloo)
http://cte.uwaterloo.ca/teaching_resources/tips/teaching_assistant_checklist.html
A list of questions you may want to ask during your initial meeting with the course instructor.

Department of Chemistry and Biochemistry Teaching Assistant Handbook (University of Guelph)
http://www.tss.uoguelph.ca/id.ta/chem_ta.pdf
A department specific guide for TAs in Chemistry and Biochemistry with additional information about running labs and grading lab assignments.

Diversity and Inclusive Teaching (The Learning & Teaching Office, Ryerson University)
www.ryerson.ca/lt/resources/inclusiveclass
This site provides a list of over thirty articles/web resources on inclusivity in the classroom, with web links.

Engineering Education Resources wiki (Queen's University Faculty of Electrical and Computer Engineering)
http://bmf.ece.queensu.ca/mediawiki/index.php/Engineering_Education_Resources

Handbook for Teaching Assistants (Queens University)
http://www.queensu.ca/ctl/resources/files/pdf/TA_Handbook_2007.pdf
Includes sections on advising students, creating a safe learning environment and tutorials/labs.

Handbook for Teaching Assistants (University of Western Ontario)
http://www.uwo.ca/tsc/tahandbook/index.html
This online Handbook covers a range of topics of interest to new and experienced TAs including marking, feedback, diversity in the classroom and dealing with ethical issues.

Handbook on Teaching & Learning (York University)
http://www.yorku.ca/cst/grads/tahandbook/index.html
This is another online Handbook that covers a range of topics including marking, critical skills, helping students with specific needs and international TAs.

On-Line Faculty Development Associates http://www.developfaculty.com/online/index.html
Provides information on over 80 topics, including organizations and conferences, as well as information on active learning, classroom assessment, classroom management, grading and more.

Research on Teaching & Learning Resources (Centre for Leadership in Learning, McMaster University)
http://cll.mcmaster.ca/scholarship/resources/resources.html

TA Manual (University of Northern British Columbia)
http://www.unbc.ca/assets/ctlt/2009_unbc_ta_manual.pdf
An extensive manual that includes checklists for the first class, quick tips and instructional strategies.

TA Survival Guide 2010-2011 (University of Guelph)
http://www.tss.uoguelph.ca/id/ta/tapdfs/TA%20survguide%202010-11.pdf

Teaching Assistant Handbook (University of Guelph)
http://www.tss.uoguelph.ca/id/ta/tahb/tahindex.html

Teaching at University of Toronto
http://www.utoronto.ca/tatp/resources/teaching_tips.html
Tip sheets on: facilitation, marking, pre-lab talks, leading discussions, teaching problem solving and lecturing.

Teaching Tips (Stanford University)
http://ctl.stanford.edu/handouts
A collection of handouts on teaching topics, including: designing effective writing assignments; designing problem sets; tips for discussions; facilitating small groups; things to do early in the course; sample small group exercises; teaching portfolios; grading papers.

Writing (University of Toronto)
www.writing.utoronto.ca
Online writing resources for students, faculty and writing specialists. The 'Advice' and 'Resources for Faculty' sections are particularly helpful.

Appendix A: Quick Guides

The following is a set of one page (double sided) guides that contain tips and resources that you may find useful in your sessions. Print them or tear them out to bring with you to your sessions.

Leading Tutorials Quick Guide

Follow these five steps to effectively prepare for your tutorial:

☐ Complete all of the materials that will be covered in the tutorial (readings, quizzes or problem sets) and be prepared to answer any questions about them.

☐ Collect the necessary materials for your tutorial from the Instructor ahead of time.

☐ Prepare an explanation of difficult ideas or write down a question that relates to key concepts that you will teach or discuss in the tutorial.

☐ Write a lesson plan that includes what instructional activities you will use in the tutorial and how long each activity will take.

☐ Arrive in advance of your session to give yourself sufficient time to prepare.

Follow these five steps to effectively lead your tutorial:

☐ Learn student names and use them to invite students to join the discussion or to give a response to a question.

☐ If possible, arrange the classroom furniture in a way that helps facilitate a discussion (i.e. a circle of chairs is more conducive to conversation than rows).

☐ Begin each tutorial with a brief outline of what you will cover in that particular session. If you let students know what to expect they will likely relax and more freely participate.

☐ If a student gives an incorrect answer to a question, try to avoid telling them they are "wrong." Instead advise them the answer they have given is incorrect, but that you are interested in finding out how they arrived at that answer. This will encourage students to participate even if they are not sure whether their answer is "right" or not, because they know that you are interested in finding out their thought process, and not just the end result.

☐ Aim to begin and end your tutorial on time.

Here are a few instructional strategies you can try:

☐ **Think-Pair-Share**: Present students with a question or problem and let them **think** independently, have them discuss in **pairs** and finally **share** responses with the class.

☐ **Small Group Discussion:** Break the class into groups of 3-5 and have them work on problems or generate a list of discussion questions to pose to the class.

☐ **Brainstorming**: Have students generate and record as many ideas as they can in a set period of time (say 5 minutes) in response to a question or problem that you have presented.

Important Contacts:

Classroom Audio Visual Services

If you are planning to use any audio/visual equipment in your sessions, contact CAVS to book the equipment you require. They also provide instruction if you are not sure how to use the available equipment.

Mills Library, L305
http://library.mcmaster.ca/cavs
equipbkg@mcmaster.ca
905-525-9140 ext. 22761

Student Accessibility Services

If a student in your sessions requires accommodations and you are uncertain of how to proceed, contact Student Accessibility Services for more information.

MUSC, Room B107
http://sas.mcmaster.ca/
sas@mcmaster.ca
1-905-525-9140 ext. 28652

Student Wellness Centre

Contact the Student Wellness Centre for assistance if you or one of your students is in distress or requires medical help. If it is an emergency, contact Campus Security.

MUSC, Room B101
http://wellness.mcmaster.ca/
wellness@mcmaster.ca
905-525-9140 ext. 27700

Campus Security

If you encounter a situation that requires emergency assistance, dial 88 on any campus phone or use the other contact information bellow to reach Security Services.

E.T. Clarke Centre, Room 201
http://security.mcmaster.ca/
security@mcmaster.ca
905.525.9140 ext. 24281
905.522.4135
Any University Phone - Dial 88
Any on campus pay phone - "Security" button

Environment & Occupational Health Support Services

If you require information on laboratory safety, fire safety, or other workplace safety information, contact EOHSS or see their website for more information.

Gilmour Hall, Room 304
http://www.workingatmcmaster.ca/eohss/
eohss@mcmaster.ca
(905) 525-9140 ext. 24352

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Leading Labs Quick Guide

Follow these five steps to prepare effectively for your lab:

☐ Read the lab manual and relevant sections of the course textbook.

☐ If you can, complete the lab yourself and note any difficult sections in your pre-lab talk. If one has not been provided, write a lab outline for you to follow.

☐ Prepare your pre-lab talk. Be sure to include safety reminders and necessary definitions or calculations.

☐ Determine how you will keep your marking consistent. Ask the instructor if you can use a rubric or coordinate a marking scheme with other TAs in the course.

☐ Arrive at your lab early to make sure the necessary equipment is available.

Follow these five steps to lead your lab effectively:

☐ Start your lab on time and keep your pre-lab talk concise and ideally under ten minutes. Remind students of any hard deadlines at the end of the lab period and encourage them to stay on task.

☐ Circulate throughout the lab addressing individual questions, correcting lab procedures and monitoring lab safety.

☐ Try to talk to every individual and/or group at least once.

☐ If more than one group is having difficulty with a particular aspect of the lab, clarify the problem for the whole class.

☐ Ask questions like "What would you predict would happen?" or "Why did this happen this way?"

Dealing common questions in the lab:

☐ **Is it okay to be off?** Emphasize the importance of *reasonable* values and, when appropriate, discuss the implications of error analysis and accuracy.

☐ **How do you make it work?** Check that the student has consulted the lab manual for directions or a diagram. If timing is not a concern, it can be beneficial for students to disassemble and reassemble any apparatus that may be causing them difficulties.

☐ **Why did it do that?** Encourage your students to consider each part of the lab and its contribution to the final result. Linking lab work to the corresponding theory is a great way to reinforce what they have learned and clarify issues they may have with their results.

☐ **What should I do?** Encourage students to consult their lab manual and if they still have difficulty, invite them to confer with their lab partner or another group.

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MUSC, Room B101

http://wellness.mcmaster.ca/
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905-525-9140 ext. 27700

Campus Security

If you encounter a situation that requires emergency assistance, dial 88 on any campus phone or use the other contact information bellow to reach Security Services.

E.T. Clarke Centre, Room 201

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905.522.4135
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Environment & Occupational Health Support Services

If you require information on laboratory safety, fire safety, or other workplace safety information, contact EOHSS or see their website for more information.

Gilmour Hall, Room 304

http://www.workingatmcmaster.ca/eohss/
eohss@mcmaster.ca
(905) 525-9140 ext. 24352

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Teaching Strategies Quick Guide

Try one of these teaching strategies

☐**Discussions**: Discussions help students *retain* information and ideas far better than either lectures or demonstrations. In small groups or as a whole class, discussions are a great way for students to test out ideas in an informal setting.

☐**Think-Pair-Share**: Present students with a question or problem and let them **think** independently, have them discuss in **pairs** and finally **share** responses with the class.

☐**Questions**: Ask questions that are **high level**, **divergent**, **structured**, and **single**. Generate several such questions in order to facilitate discussion throughout the session.

☐**Brainstorming**: Have students generate and record as many ideas as they can in a set period of time (say 5 minutes) in response to a question or problem that you have presented. After they have "brainstormed" answers, have students evaluate which answers are most likely correct and ask them to explain why.

These are some activities to keep students engaged in your tutorials

☐**Debate**: Select a controversial topic in your field and write a debate question. Assign students to defend one side of the debate. You might want to have students write a response following the debate about which side of the argument persuaded them and why.

☐**Learning Partners**: Students can work with their partner on a number of tasks including: critiquing and editing written work; discussing a text; interviewing one another on their reaction to a lecture/reading; asking and answering questions about the assigned material; recapping lessons together; test one another; comparing notes; responding to question (think-pair-share).

☐**Panels**: Invite several students to present their views on a topic to the class as "expert panellists." Give these students time to prepare for their panel appearance and invite the class to prepare questions to ask the experts.

☐**Problem Sets**: Post on the board several problems from the lecture or from an assignment. Solve the problem yourself or ask students to suggest ways to answer the question. Discuss other ways to solve the problem and ask student to evaluate which approach to solving the problem is best and why.

Here are some tips for keeping your sessions running smoothly and effectively

☐Advise students the week before what question or topic you will be discussing the next week. This will give them the chance to think about the topic ahead of time.

☐ After asking a question, wait at least 30 seconds – in silence – for students to respond. Students will need time to think about your question and to generate an answer.

☐If possible, give students frequent opportunities to reflect on what they have learned. Response cards, student generated questions and "One Minute Papers" can help students consolidate what they have learned each session.

Appendix B: Sample Materials

This section contains a number of sample materials that you may find useful in your teaching.

Characteristics of Constructive Feedback

Feedback is most effective when it is **rounded** or **balanced** – when negative aspects are identified and alternatives suggested, while positive aspects are identified and encouraged (Piccinin, 2003).

Wording (adapted from Bergquist & Phillips, 1975)

□ **Be Specific** rather than general, and include an example. To be told that one is 'dominating' will probably not be as useful as to be told, "in the conversation we just had, you did not seem to listen, and so I felt forced to accept your arguments."

□ **Be Descriptive,** rather than evaluative. By describing your own reactions, it leaves the individual free to use the information or not. By avoiding evaluative language, it reduces the need for the individual to respond defensively.

□ **Focus on Behaviour,** rather than on the person. It is important that we refer to what a person does, rather than to what we think or imagine s/he is. Thus we might say that a person "talked more than anyone else in this meeting" rather than s/he is a "loud mouth." The former allows for the possibility of change; the latter implies a fixed personality trait.

Sources

□ Feedback is most likely to be integrated into learning when there is a good relationship between the giver and the receiver. Therefore, it is important for the source of the feedback to be perceived as credible and trustworthy. To maximize the possibility of learning, students should perceive both the instructor and their peers as knowledgeable and able to provide appropriate feedback, with their best interests at heart (Piccinin, 2003).

Process

Feedback is most useful when provided in a **timely** fashion. Bergquist and Phillips (1975) provide an easily learned process for providing effective feedback.

□ **Begin with the words and judgments of the person who is requesting feedback.** Ask the student to self-assess first, and listen closely. Solicited feedback matched to a student's own perceptions and concerns is more likely to be taken seriously.

□ **Think of the needs of the person receiving feedback.** Feedback should be given to help, not to hurt. It can be destructive when it serves the giver's needs (e.g. it makes us feel better to unload). Adjust the balance of positive feedback and negative feedback to meet the needs of the receiver. In addition, make sure the amount of information provided is **manageable** so the person does not become overwhelmed. A few key points are best.

□ **Check to insure clear communication.** Even with the best intent, feedback is often threatening and thus subject to considerable distortion or misinterpretation. When facilitating a class in which students provide feedback to peers, rephrase statements to test whether they correspond to a speaker's intended meaning, and ask the receivers whether they understand.

□ **Check to determine degree of agreement from others.** When feedback is given in the presence of others, both giver and receiver have an opportunity to check with others in the group about the universality of the feedback. Is this only one person's impression or is it an impression shared by others?

Guidelines for Essay Scoring: Increasing Objectivity

Adapted from Robert Runte and Richard Stiggins

Realistic Expectations
- ☐ Set *realistic expectations* and performance standards that are consistent with instruction and that promise students some measure of success if they are prepared.

Check Scoring Guides
- ☐ Check scoring guides against a few real responses to see if any *last-minute adjustments* are needed.
- ☐ *Refer back to scoring guidelines regularly* during scoring to maintain consistency.

Meet with Other Markers
- ☐ Meet with other markers and the professor – discuss the assignment and make sure that you all have the same understanding of the criteria and the goals. This will help you be more consistent as a group when you make decisions in marking. If possible, try making one assignment together.

Read One Question at a Time
- ☐ Score all responses to one question the *same day*, and if possible *in one sitting* without interruptions
  - o Promotes *consistency* in your application of standards, and
  - o Easier to *keep track of criteria* for each *question* than for the whole test
  - o *Speeds up the scoring* process.
  - o Evaluate responses *separately for matters of content (knowledge mastery and reasoning) and matters of form (i.e., writing proficiency).* They require the application of different criteria.
  - o Once Exception for marking each question separately is if the questions build on each other

Halo Effects
- ☐ Read *all of one question at a time, otherwise the mark a student gets on a previous question prejudices this one*
- ☐ Keep scores of previously marked question out of sight e.g., on a separate piece of paper
  - o Shuffle papers after the first run through – Why? To reduce halo effects – so you do not always have the same sequence of best or worst papers

Comment on the Paper
- ☐ Provide feedback in the form of *points and written commentary* if possible. Explain *why* they got the mark.
- ☐ I am inclined to circle spelling, grammar, corrections even though it is not a major part of my scoring. Despite telling students this, they believe they received their mark due to all the spelling and grammar corrections.

Score Blind
- ☐ If possible, *keep the identity of the respondent anonymous* when scoring. This keeps your knowledge of their prior performance from influencing current judgments.

Mark Twice
- ☐ Although it is often difficult to arrange, *try to have two independent qualified readers score* the papers. In a sense, this represents the litmus test of the quality of your scoring scheme. If you and a colleague disagree, you have uncovered evidence of problems in the criteria or the process used to train raters, and some additional work is in order. When very important decisions rest on a student's score on an essay assessment, such as promotion or graduation, double scoring is absolutely essential.

Irrelevant Answers
- ☐ Have a policy on glib answers – tell student if bluffing will help

Sample Rubric for Marking Essays – amend as necessary

Name _____   **Essay #** _____

CRITERIA	Points 1 to 5
THESIS and CONTENT (Development) The essay has a thesis—a single, central point that is interesting, original, striking and substantial. The central idea is developed in the essay through well-chosen, appropriate, concrete details that show originality and freshness. Author shows rather than merely tells. Generalizations and assertions are defended. Arguments are logical.	
ORGANIZATION The essay is organized and well structured (there is a beginning, a body, and a conclusion). Structure works to develop thesis persuasively. Stays on topic and uses transitions to integrate new ideas and developments. Introductory paragraph(s) is (are) interesting and appropriate. Concluding paragraph is satisfying.	

PARAGRAPHS	
Paragraphs are organized, unified and coherent. Each supporting paragraph has a controlling idea (which may be expressed in a topic sentence). In supporting paragraphs, topic idea helps further the thesis.	
STYLE	
Sentences are varied and fluent. The essay is written in a style and tone appropriate to the audience, topic and purpose. Words are appropriate and well chosen. Writer avoids jargon and sexist language. Writer seems to be speaking in an authentic voice. Paper is enjoyable and interesting.	
SUBTOTAL	
GRAMMAR, SPELLING, MECHANICS Subtract points for errors in grammar (comma splices, fragments, fused sentences, agreement, etc.), spelling, and mechanics (margins, format, etc.).	
TOTAL	

Sample Rubric for Marking Presentations – amend as necessary

Presenters	....
	....
Date, time:	
Topic	
Assessor's name (you might also have students assess each other and factor in these assessments when assigning final grades)	

| Category	Some elements to assess	Mark
Content	• Demonstrated a strong grasp of concepts; worked adeptly with course materials	/20
	• Developed own arguments / further knowledge related to topic; research was thorough and incorporated strong external sources	/20
	• Presentation was well-organized; ideas and shifts were 'sign-posted' so that classmates could clearly follow.	/10
Presentation style	• Delivery was clear, at a reasonable pace, and worked to maintain classmates' interest. • Presentation respected assigned time constraints.	/15
	• Presenters collaborated effectively in both preparing and executing the presentation. [some TAs find it helpful to have each presenter submit a short written evaluation of the group process. This helps to identify problems and see if all members worked together.]	/20
Discussion	Presenters' questions helped to stimulate a lively discussion and foster class engagement with the topic; presenters responded helpfully to questions posed by classmates.	/15
Total		/100

Self-evaluation form to be filled out by each student presenter

What was good	
What can be improved	
Next time, I will....	

Mid-Term Evaluation Form

1. What is working well in this Tutorial/Lab?

2. What is NOT working well in this Tutorial/Lab?

3. How would you rate the effectiveness of your TA?

Poor   **Excellent**

1   2   3   4   5   6   7   8   9   10
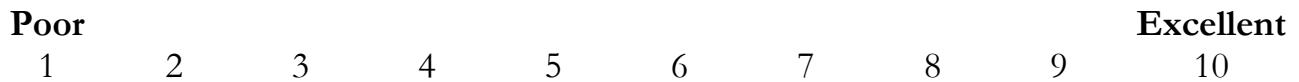
4. Do you have any suggestions on how to improve this Tutorial/Lab?

5. Other Comments:

Quick Feedback Form:

This TA should:
Start:

Stop:

Continue:

This TA should:
Start:

Stop:

Continue:

What Questions Engage Students?

"What's in a question, you ask? Everything. It is a way of evoking stimulating response or stultifying inquiry. It is, in essence, the very core of teaching." (John Dewey, 1933)

Research on questioning behavior in university classrooms by Barnes (1980) reveals some surprising facts. First, a very small portion of most classes is spent in instructor questioning (3.7 %). Second, the great majority (82%) of those questions are at the lowest cognitive level (rote memory). Third, almost a third (32 %) of those questions that are asked elicit no learner response. In short, whether the class is called a seminar or a lecture, the main activity is the instructor lecturing with learners passively listening. Good questions engage students in thinking about or discussing course issues.

In asking good questions, we aim to:
a)   Increase student engagement, and
b)   Develop higher-order cognitive skills

Good questions are: High-level, Divergent, Structured and Straightforward. There are times and places for other types of questions, but questions of this type produce two to three times more responses (Andrews 1980) *and* help develop cognitive skills.

To encourage the greatest student engagement:
a)   Try to incorporate **all four engaging categories** in each question.
b)   **Display the question** on a blackboard, by overhead or data projector.

Not Engaging	Engaging
Low Level Questions	**High Level Questions**
Require only rote memorization and content paraphrasing. For example: • *Who are the main characters in Hamlet?* • *What proportion of offspring will demonstrate a dominant heritable trait if both parents are heterozygous for the dominant allele?*	Require application, analysis, synthesis, or evaluation (Bloom 1956) (elicits higher-order thinking). For example: • *If Laertes was left out of the play would it still be Hamlet? Why?* • *Characterize the evidence required to establish the heritability of a behavioral trait.*
Convergent Questions	**Divergent Questions**
Imply a single right answer to a question (riskier to answer). For example: • *What is Hemmingway's main theme in "A Farewell to Arms?"* • *What cell type in the blood carries hemoglobin?*	Suggest many possible correct responses (safer to answer). For example: • *What are some of the themes in "A Farewell to Arms?"* • *Propose an experiment to test the hypothesis that malaria can be transferred between people.*
Unstructured Questions	**Structured Questions**
Vague, non-specific, wide open; requires time to organize a good response (difficult to know what is required; risky to answer). For example: • *What should a doctor do?* • *How do you characterize a population?*	Direct the learner to a specific approaches, specific areas of the subject matter or frameworks to arrive at an answer. For example: • *What could a general practitioner prescribe for these unusual symptoms?* • *In what ways could you use 'mark and recapture' to estimate flock size in a population of birds?*
Multiple Questions	**Straightforward Questions**
Contains several questions or is interspersed with background information. For example: • *What are some of the reasons Tolstoy is condemning him? I mean... what is the main problem? At the end of the story, we have a religious solution. Some of you said you didn't think that fit with the rest of the story.* • *How do bacterial resistance genes, such as those in the blue part of your text, contribute to cell type selection after genetic manipulation?*	Clear; addresses one issue at a time. For example: • *What are some of the reasons Tolstoy is condemning him?* • *What are some ways to select for successful transformation in bacteria?*

Adapted from Ray V. Rasmussen, <u>AACE Journal</u>, 1984, 12(2), pp. 38-47.