

**STARTED FROM THE
GROUND STATE
NOW WE
HERE**

*a guide to SAM:
Peer Leading and Peer Mentoring*

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Introduction

Dear Peer Leaders and Peer Mentors,

Welcome to Seminar in Academic Mentoring (SAM) Fall 2016!

Throughout this book you will find advice from Peer Leaders and Peer Mentors, who were in your situation just a year ago. Throughout the first semester of leading and mentoring, you will learn several ways to facilitate your sessions with your particular group of students. You will make mistakes, you will learn and grow, and you will also be very successful.

Every year, a theme is chosen by the Peer Leaders and Peer Mentors who took SAM. This year, the leaders and mentors chose Drake, which was great news for us, Dr. Lutes and Dr. Szteinberg, because we actually know and enjoy his music! Furthermore, we agree that Drake relates to the philosophies of PLTL and Peer Mentoring. Keep on reading to find out how.

Aubrey Drake Graham, sometimes referred to as “Drizzy”, is a Canadian hip hop artist. He has been dubbed a modern-day poet because of his emotional lyrics and soft melody (<http://www.vibe.com/2012/07/drake-crowns-himself-first-successful-rap-singer/>). Drizzy’s lyrics are quoted extensively because he talks about important topics such as love, jealousy, and his support group. There is even an app to use Drake’s lyrics when using one’s own words are not enough (<http://www.buzzfeed.com/kirstenking/tables-turn-bridges-burn>).

So what is the connection between Drake and Peer Leading and Peer Mentoring? Besides having song titles that truly reflect the collaborative nature of our programs, which appear as titles for this book’s sections, Drake’s career and rise to fame demonstrates how working with others can lead to great things. Let’s explore a little more.

Drake acknowledges his family through his songs.

In “*Look What You’ve Done*”, Drake talks about his family and the support he received to become the artist he is today. He even includes a recording of his grandmother’s voice message at the end of the song. He says “You knew that I was gonna be something”. Just as Drake vocalizes about his family, you have to remind your students that we are all together in this. We want students to succeed, and that is why PLTL and Peer Mentoring programs exist. We are a family--the Gen Chem family.

Drake has collaborated with several other artists to create memorable music.

The list is long and distinguished, including top artists such as Mary J. Blige, Trey Songz, Rihanna, Lil Wayne, Niki Minaj, Eminem, The Weeknd, Jay-Z, Jamie Foxx, Timbaland, and several others. Drake acknowledges his friends and knows that they helped him reach a larger audience (check out his song “*Crew Love*” with The Weeknd). Collaboration leads to greatness. Remind your students that PLTL and Peer Mentoring foster this philosophy, and that there is research to back it up.

Drake has talent but he has also worked very hard to get to the top.

In his song “*Pound Cake*”, the lyrics “Tables turn, bridges burn, you live and learn” hit home about learning from making mistakes. Furthermore, in an interview, Drake admitted that perfection does not exist, but that you can get close to it by giving your all:

“Perfection to me is, I walk away from a situation and say, ‘I did everything I could do right there.’

There was nothing more that I could do.' I was a hundred percent, like the meter was at the top. There was nothing else I could have done. You know? Like, I worked as hard as I possibly could have. That's perfection." (<http://www.gq.com/story/drake-interview-gq-april-2012>).

Remind your students that college is different from high school, and even during college things can change. The key is to keep moving forward, getting feedback and testing new ways that may work to study. As Drake said in a high school commencement speech, "Sometimes it's the journey that teaches you a lot about your destination." (<http://music.cbc.ca/#!/blogs/2012/10/Drake-gives-high-school-commencement-speech-watch-video>)

Drake believes in himself.

Drake has said "Know yourself, know your worth" ("0 to 100"), which is helpful in any situation. Particularly, in academic life it is very important to know yourself in terms of what works regarding study habits. As Leaders and Mentors, you can serve as examples to your students on how to adapt your own study techniques in order to improve for future work such as quizzes and tests.

The SAM Book Advice

This book is split into five sections, in which Peer Leaders and Peer Mentors identify challenges they faced when running their sessions during their first semester of peer learning. There is also a lot of advice provided on how to deal with these challenges. The Peer Leaders and Mentors selected the order of appearance of these topics, so that you can use them every week as you navigate this exciting semester.

In "*What a Time to be a Leader/Mentor*", there is advice on how to handle the very first session (or sessions). **Julia Holber** states: "Be sure to follow the PLTL guidelines in this first session- it will set the expectations as to how the rest of the sessions will go for the rest of the semester. Remember- you were chosen to be a PLTL leader or peer mentor for a reason."

If you are worried about making mistakes, which you will, **Allison Ji** advices to "use your mistake as a sort of icebreaker type thing, and make it clear to the students that you are working with that despite your exalted status as a PLTL leader, you still are a student and can make mistakes." Overall, you need to show your students that you know you deserve to be their Peer Leader/Mentor. **Andrew Schaffer** states "The biggest thing that you need to remember is you need to be confident in yourself, how are your kids supposed to trust you and believe you if you are not even confident in yourself? This confidence comes mostly from being prepared for the session." And **Ben Zeno** adds: "If you want your students to be comfortable in your PLTL or Peer Mentoring session, you need to be comfortable!"

Students will try to bend the PLTL and Peer Mentoring rules, but it is important for you to follow the philosophy, because as **Emma Mehlman** points out: "PLTL is not about memorizing how to do every question in the packet, but is about the process, and the students are gaining valuable process skills regardless of how far you get in the packet (assuming the reason for going slowly is not that people are distracted)." **Lucy Simpson** provides advice on making the group feel as a strong community: "If you want strong group dynamic from the start, everyone has to at least know everyone else by name." And **Andrew Weller** furthers this by saying: "Neither you nor your students should be dreading your upcoming sessions, and a little camaraderie, instilled in the first session and built on thereafter, can help with that."

After conquering the first session(s), you will start to notice differences among your students. The section "*Ever since I led the session, you...*" is about managing sessions by knowing your students very well, and their personalities. **Tanvi Puri** talks about two kinds of students and how things can change over time:

"There is the dominant student and the quiet one, the student who's watched every lecture twice and the one who hasn't gone to class all week. ... Student personalities can change a lot through the semester. Quiet students may come out of their shell if they get a confidence boost from a good exam, and dominant students may stop talking altogether. Keeping an eye out for changes will let you see whose confidence you may need to boost most in a session." And **Momo Oyama** identifies another type of student, the one "who refuses to do any calculations."

Anjana Rajan provides a way on how to deal with quiet students: "when assigning small groups or pairs, pair the quiet students together. This way, these students are forced to speak with each other to figure out the question at hand." And **Joanna Kim** explains how to deal with a student who participates but needs some help: "If the student cannot come up with reasonable explanations, this is where your probing questions come in! ... Speaking of which, if students seem to struggle with a concept or are frustrated with the material, connect with them!"

You have the control of your group, and as **James Weatherseed** states: "As long as you are polite with your students there is no reason why you should feel uncomfortable asking them to let others talk. ... While it may seem strange telling other students what to do, you have to maintain a sense of authority. You have to use this authority to keep your sessions on track and your students focused."

At the end of the day, it is important to balance out student personalities, because as **Marisa Ilag** points out: "Facilitating such a diverse group of students can at times be challenging, but the key is to make sure that all members are given the chance to voice their opinions and engage in discussion."

In PLTL, the Collaborative Learning Strategies (CLS) are vital to the philosophy of the program, so in "*Round Robin: You Only Talk Once, that's the motto – YOTO*" there is advice on how to use the strategies in the best possible way. **Maddy Drolen** reminds you to first "know your students and how they interact with one another and the material" and **Mani Raman** explains that PLTL "is about giving first-semester freshmen an opportunity to be part of a community."

Then, **Daniel Knudsen** provides some calm by stating that: "By virtue of being implicit in the fabric of PLTL, your students will accept the strategies as fact and as divine commands handed down to them by Dr. Daschbach. This may not seem important at first, but it plays a crucial role in your use of collaborative learning strategies – namely, your students will go along with the weird ways in which you force them to work with one another."

At times, the CLS will have to be adapted. **Sih Oka-Zeh** reminds you to count on others who have gone through this before: "The senior leaders will have good suggestions as to how they've led their sessions in the past and will have good insights as to what types of questions you should try to ask throughout your sessions." And **Andrew Friedman** recommends to try "challenging the group on the more fundamental elements of *why* something works the way that it does can generate some good cross conversation in your group."

For Peer Mentors, **Sophia Shi** shares how she used the CLS to her advantage in her sessions: "Since the structures of our sessions are quite different, peer mentors don't typically use 'Scribe', 'Round Robin' or pairs/small groups explicitly. Nevertheless, I came to realize that the general idea behind these strategies were still applicable. Regardless of whether or not you are a PLTL leader or a peer mentor, mastering the collaborative learning strategies will help you foster that student-driven, inclusive and welcoming environment that we strive for as academic mentors."

In “*O to 100*” the Peer Leaders and Mentors provide advice on how to adapt a growth mindset because, as **Sarah DeCou** says: “A growth mindset encourages students to persevere through failure and to keep a positive outlook for the future.” When students receive their grades, there will be times when they are not happy about this. **Grant Black** recommends: “Instead of viewing grades as concrete numbers, instill in your students the importance of improvement relative to past performances. And **Connie Gan** suggests that students help each other improve: “A quick strategy where the students could help each other out is if they shared with each other how they studied and how that worked out for them.”

Shannon Jiang recommends telling your students how you were in a similar position before: “The best advice you could give to your students as a peer leader or mentor draws upon your own experiences and insights. Share with them how you approached studying for exams, what study tactics you used, and how you avoided or dealt with stress and failure.”

The main goal is to keep moving forward, and as **Saronawit Belay** says: “Whether you are a PLTL leader or a peer mentor, one of your most important responsibilities is maintaining an environment where everyone is engaged in the group discussion and constantly encouraged to strive higher in understanding the given material.” **Chris Edwards** follows by suggesting to “Provide opportunities for all students to explain their correct answers, work on the board, and defend their logic. ... This is specifically the reason there is no answer key for the PLTL packets—they must learn to accept their own answers.” And most importantly, **Yash Bhatia** reminds you to continue on the task: “Trying to instill a growth mindset in your students is a tall task, but it is so necessary for them to be happy, confident learners in the long run.”

Finally, in the section “*If you’re watching lecture videos now, it’s too late*” there is advice on how to survive the mid-semester slump. Again, remind your students that you know what they are going through, as **Erica Hwang** shares: “It helps to share your own experience with them and tell them that you understand that it feels like a lot is going on, but really emphasize how important staying on top of the material is for Gen Chem.” **Kelsie Kodama** agrees: “While we are expected to be role models for our students, nobody is perfect; your students could greatly benefit from your own personal experiences with dealing with the mid-semester slump.”

The mid-semester slump will affect you as well. **Kelsey Barter** says: “You—the successful gen chem student—are a role model for every one of your students. This should make you a little nervous (in a good way) because when you lead your session each week you are not just representing yourself or the chemistry department, you are showing opening up to your students and telling them how to be a successful WashU student.” **Katherine Pjevac** advises “to stay on top of the material. I know it can be hard when you have two papers and a test that are due the following week but staying on top of the material will show your students that you still care about helping them and that coming to the session is not a waste of their time.” And **Courtney Vishhy** suggests to “utilize the time spent in PAM. Work with other leaders to come up with good probing questions to guide the students through the problems in the packet.” And finally, **Brian Chu** tells you to remember that “building chemistry within your group is just as important as the chemistry that they do. By building good rapport with your students, peer mentoring and PLTL sessions will run more smoothly, so you can avoid the mid-semester slump all together.”

Your first semester as a Peer Leader/Mentor will be full of learning experiences. This semester’s journey will lead everyone to amazing destinations, and your students will be glad to have you as their Leader or Mentor.

Your students will benefit a lot from you, even though at times it may not be apparent. By the end of the semester, the work put in will be worth the time and your students will be very thankful, and you will

probably agree with Drake's hopeful statement:

You know what it is when I finally make it home.
I just hope you miss me a little when I'm gone. ("Miss Me")

In general, PLTL and Peer Mentoring are great community-building experiences, and will remain in the memory of your students. Once again, Drake is here to say it better:

I'm lookin' forward to the memories of right now
Never forgettin' from where I came. ("Unforgettable")

Enjoy your semester! We look forward to working with you, Dr. Daschbach, Dr. Luo, Dr. Frey, the Gen Chem team, as well as learning from you to make PLTL and Peer Mentoring even better programs in the future.

Best,

Dr. Bryn Lutes
Dr. Gabriela Szteinberg

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What a Time to Be a Leader/Mentor**By Julia Holber**

Congratulations on being chosen as a peer leader or mentor! You have been chosen to be a part of an amazing program that is so rewarding and that will teach you so much. In preparing for the first session, remember that this session builds the foundation for the rest of the semester and that a strong beginning will set you up for a successful semester.

To open the first session, I wrote a list of ten things on the board. These included some logistical things, like name, student ID, food allergies, and reason for taking gen chem. It also included some interesting questions, like favorite ice cream flavor, most fun you've had in the past year, involvement in high school, among others. I discussed my students' answers with them while they were writing and facilitated discussion among them. This gives students something to work on and start to talk to one another about at the beginning of a sometimes awkward, silent first session.

When you start the session, give a sincere introduction to your students. Go beyond your name, hometown, and major. Tell them about the most important things in your life, your favorite hobbies, your family, what you are involved in at Wash U. I also gave my answers the ten things I had written on the board. Tell them about your experience in gen chem if it is relevant or inspiring in any way. Make sure you convey to the students that you are there to support them, to help them, and to get them through this first semester of college.

Next, you will do an ice breaker. Keep in mind that at this point your students have probably done dozens of ice breakers since arriving at Wash U. My favorite ice breaker that I use as a camp counselor is "speed dating." You join in with the students and split into partners. There are a few rounds, each about 60 seconds long. You give a topic of conversation for each 60 second round, and then one partner in each group rotates so the partner groups change each round. Topics can range from favorite school subjects in high school to celebrity crushes or favorite bands. This allows all the students to talk to one another and provides a more engaging, relaxed activity than simply going around and listing your favorite ice cream flavors to the group.

You will then go on to explain the PLTL/peer mentor philosophy and begin the packet. This was what I was most nervous for, but PAM prepares you so well to be able to facilitate the group and ask probing questions. Use PAM wisely- prepare questions, figure out where your group might struggle, take good notes on each question so you can understand how to steer your group in the right direction. Be sure to follow the PLTL guidelines in this first session- it will set the expectations as to how the rest of the

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sessions will go for the rest of the semester.

Remember- you were chosen to be a PLTL leader or peer mentor for a reason. Be confident, be personable and approachable, be fun and engaging, and set the foundation for an amazing semester.

Give Yourself a Second Chance

By Allison Ji

If you are reading this right now, you are most likely one of two groups of people. Either you are a new mentor that has not yet had your first session yet or you have just finished your first session and have been procrastinating on writing that reflection for SAM. If you are the former, then “Congratulations!” because you definitely haven’t heard that enough, yet. Unfortunately, this essay may not be the most helpful essay for the current you and thus I would recommend browsing through one of the other essays in this section in addition to this one. On the other hand, if you are the latter, and especially if you felt like your first impression was somewhat lacking, worry not! There are ways to salvage your students’ impressions of you.

I’m going to start by assuming that you, the reader, started this semester knowing as much about mentoring as I know about Drake—that is to say, close to nothing. Given this assumption, if you are anything like me, you probably panicked (or, if you have not yet had your session yet, you will panic) and most likely forgot something that you only later realized was important. But don’t worry, that’s what second sessions are for!

For those of you reading this before your first session, there are a few things that you should not forget that will greatly help your first session along. Among these things is a blank piece of paper. A piece of paper for students to sign-in on is incredibly helpful when you don’t yet know the names of your students, as is the case during most first sessions. You can even take it a step up and print out a page with the names of the students already on the page and have the students make some sort of mark by their name to indicate their presence. However, if you forget these semi-important things, it’s not the end of the world! In fact, you can use your mistake as a sort of icebreaker type thing, and make it clear to the students that you are working with that despite your exalted status as a PLTL leader, you still are a student and can make mistakes. Use it as a chance to make yourself seem more approachable and don’t dwell too much on the mistake. By the end of the semester no one will remember.

On the less tangible side, there are the rules of mentoring and in particular PLTL. While a written copy of the official PLTL rules will be distributed to each of the students, sometimes in the midst of first session events, the unofficial rules will be forgotten. Rules like the “cell phone rule” where students are not to use their cell phones during the session unless for an emergency can be important in keeping a smoothly flowing session, but what if you forget to mention it during the first session along with the other rules? In

this case, you can take two different paths, state it at the beginning of the next session (that's what second sessions are for!) or slowly incorporate the rule as you see issues with cellphone usage.

Overall, there are many ways that you could mess up during a first session and it can be difficult to think of ways to make up for it. However the best way to make up for a non-ideal first impression is actually to not dwell on your regrets and keep trying. Lucky for you, these students will have many more sessions to see how you really are and you can easily show them that you are an outstanding peer leader, because you are, and you can start remaking your impression with the second session. Chances are if they stay, they won't even remember some minor hiccup in your first session by the end of the year. Of course, if they don't stay, don't take it personally. Perhaps they are busy or realized that PLTL is not for them.

Just remember, there was a reason that you were selected as a PLTL leader and do your best to show that your students. Give yourself a second chance to do better, your students already are.

You the Best [Leader] They Ever Had**By Emma Mehlman**

So it's almost time for your first session. If you're anything like me, you're probably a little nervous. That's ok. The first thing to remember is that you got hired for this position. Dr. Daschbach picked you out of all the students who applied, which is huge. Take this moment to give yourself a little pat on the back and a deep breath, because you can do this.

The first session, as you have most likely heard by now, really hinges on the icebreaker as this sets the tone for how your group will interact all semester, and if it hasn't yet, it will soon become clear that group dynamics are pretty important to your job. You'll probably spend some time thinking about what icebreaker will be the most fun and get your group to loosen up the most, which is great. One thing that I would recommend is choosing an icebreaker that really requires that everyone learn everyone's name. The first session you will end up making a huge effort to learn everyone's name by the end of the day. But if your group is anything like mine, the first session can be a little overwhelming for the students, and what I realized a little too late was that by the third week, my students didn't know each other's names! This, obviously, created a bit of an awkward situation, so to avoid that consider how to incorporate names into your icebreaker.

Another thing that can really trip new leaders up is stress over finishing the packet. I know in my first few sessions I remembered how frustrated I would get as a student when the group didn't finish the packet. Your group will probably feel similarly, but something that the students don't get and you do (or you eventually will) is that PLTL is not about memorizing how to do every question in the packet, but is about the process, and the students are gaining valuable process skills regardless of how far you get in the packet (assuming the reason for going slowly is not that people are distracted). So with that in mind, TAKE YOUR TIME while going over the philosophy. Add in anything that you think would be additionally helpful. From experience I can tell you that the group will eventually forget or disregard the rules and you need to know that they have a solid foundation with them so that when you remind them later in the semester, they know what you are talking about.

Lastly, good luck and remember to be confident in your abilities (so that your group can be confident in you as a leader) and bring a killer snack!

The First Session

By Andrew Schaffer

First off congratulations on becoming a Peer Leader, you have worked hard conquering two semesters of General Chemistry. However, I am sure that you are nervous as I was about going into your first session. You will question yourself about whether or not you know the material or if your kids will like you or each other, there will be a lot running through your head. The biggest thing to remember is that you were chosen for a reason, you know the material and you will do great, just take a deep breath everything will work out.

The biggest thing that you need to remember is you need to be confident in yourself, how are your kids supposed to trust you and believe you if you are not even confident in yourself. This confidence comes mostly from being prepared for the session. Pay attention during the PAM session when we go over the packet together, and make sure that you are not only able to do the problem but be able to ask questions about it and explain the concept.

In the few days before your first session send out an email to your students telling them what to bring and what that week's session will be on as well as telling them where the session is especially if it is hard or confusing to get to. Then on the day of your session, arrive early and if possible go in to set up the room so that way you will keep everyone close together and can see the white/chalkboard. As the students filter in talk with them, you are not only here to help them with chemistry but as a role model and they will eventually start asking you all sorts of questions about other things to do with college.

Another thing is be prepared for some awkwardness as you are going to be leading a group of 8-10 kids who most likely never met each other or you. Come prepared with a short ice breaker, the classics are fine like two truths and a lie or if you have a particular favorite you should use it. Another way to ease the awkwardness is to bring some sort of treat for them which can be you just picking something up at Paws and Go before the session, because who doesn't like free food in college. However the biggest thing you can do to bring your group together is to learn all their names quickly, I did this, every chance I had I used their name. Also I know some people who made name cards for them which would be a good idea too.

After your ice breaker it is a good idea to come up with a few ground rules especially think about things like what your cell phone policy will be. You should have a few rules like be respectful

to everyone and there are no bad questions. However, also ask for input from your students about what they want as rules. In addition make sure to explain the concept behind PLTL and why you wouldn't give them the answer and why you do each of the different collaborative learning strategies.

Finally the last piece of advice that I will give you is to relax, you aren't expected to know everything and it is ok to tell them that you don't know however point them in the right direction whether that is Dr. Daschbach or more likely RPM sessions. You are supposed to be a peer to them as well so talk with them and make the session fun. At the same time you are their leader which in this case you act more as a guide. So good luck and know you are going to do great this semester.

#YOLO: You Only Lead Once**By Lucy Simpson**

It's your first session! You may be excited or nervous, or somewhere in between. I remember going over notes and concepts carefully, trying to be prepared for any possible question the students might have. While being prepared is important, the first session has more to it than just knowing the material. Welcome to the world of peer leading!

This is the first impression that your students will have of you, and you want it to be a good one. That being said, before you get to chemistry, you need to learn some names. If you're a PLTL leader, you'll probably make nametags, but I encourage the peer mentors to do this too. I thought that because I only had six students in my mentoring group that I didn't need nametags, but I was wrong. Nametags are not just a way to allow you to learn all the students' names, but also a way for the students to get to know each other's names. Although I learned my group's names quickly, it took a couple of weeks for the students to learn each other's names because I didn't use nametags. Learn from my mistake! If you want strong group dynamic from the start, everyone has to at least know everyone else by name.

Once nametags are done, be sure to introduce yourself if you haven't done so already. Tell them your name, your major, or whatever else you feel like sharing. By disclosing information like this, you remind them that you're a WashU student too. It's important that they don't view you as another teacher or professor—they need to know that they can trust you and look up to you, but that you're all students and you share that in common.

Another way to make a good impression is pretty straightforward: bring food. Bake it or buy it, doesn't matter. Everyone needs to eat, and bringing something shows that you are dedicated and thoughtful, and that you want to be a good leader. Food isn't necessary every week in my opinion, but it is a nice treat on the first session and especially before exam weeks!

Lastly, relax. You are here for a reason. You are capable of leading, or you wouldn't be here. Start off with a good first session and keep the ball rolling—good luck!

The Ice Breaker

By Andrew Wollen

Let me ask you a question. Does the idea of a group where students walk in single-file, put their heads down on the table, silently wait for you to give them permission to speak, and half-heartedly give pity answers to your shoddily-put-together probing questions sound appealing to you? While this may seem like a subjective question, it actually has a correct answer: no. You would much rather have a group where people are excited to be there, where people socialize and keep spirits up, and where everyone is actively participating. Not only is this the environment most conducive for learning from one another, the whole purpose of PLTL, it also encourages students to return to the session, which will further help them in their Gen. Chem. journey.

But how, pray tell, can you achieve this lofty goal? There are many different factors, but a lot of it comes down to your first session, and, to narrow the perspective down yet a bit more, it comes down to your ice breaker. That might be a bit dramatic: a bad ice breaker won't turn your students into the zombies mentioned above. However, first impressions *are* important. Unless you have an odd ball in the group (a blessing in its own way), during your first session, students will most likely come in early, sit down, and look around nervously, barely speaking. Of course, it's good to talk to them here (unless you revel in awkward situations), but they will still feel uncomfortable, especially around each other. Thus, you want an ice breaker that will force them to be even more uncomfortable. In fact, try to get them as uncomfortable as possible while, of course, not breaking social norms/scarring people/doing something unprofessional. After the ice breaker is finished, the greater part of the initial tension will have disappeared. Everyone will have been forced to be vulnerable in some way, however small, which will make them more likely to open up in the future. A large part of the discomfort comes from this reluctance to open up, and when they are forced to do so, the situation isn't nearly as bad.

An ice breaker that worked for me is Concentric Circles. In this activity, a question is asked. It can be something normal, like "Where did you grow up?" or "What is your favorite movie?", or it can be something more unusual, like "If you could be any cereal box character, who would it be and why?" or "If you could remove one part of your morning routine, what would it be and why?". You give your students a couple of minutes to answer, then you have every other person in the room stand up and rotate. If there is an odd number, you can also participate. Another question is asked, and the cycle continues. At the end, ask everyone to say something they learned about someone else. I like this ice breaker because it requires one-

on-one conversations as well as talking to the group, which is what will be required in PLTL. It also involves physical movement, which has a major positive effect on everyone's enthusiasm. As a final bonus, conversations side track, students begin to get to know one another, and they start to converse amongst themselves more easily.

Of course, this isn't the only viable ice breaker, but I would recommend doing something involved like this rather than just having everyone answer a question. Another thing to note is that ice breakers aren't necessarily limited to just the first session. If you get to the next session and everyone is still uncharacteristically reserved, you should by all means do another. It probably won't have as big of an effect as the first time, but it could potentially help. Neither you nor your students should be dreading your upcoming sessions, and a little camaraderie, instilled in the first session and built on thereafter, can help with that. Congratulations on your selection for PLTL, good luck on your first session (if you are reading this beforehand like you should be doing), and I hope the rest of the semester goes well for you.

The Real is On the Rise

By Ben Zeno

If you want your students to be comfortable in your PLTL or Peer Mentoring session, you need to be comfortable! Other tips follow below, but that is the most fundamental point. Students will follow your lead, especially in the first two or three sessions in the semester when you are still establishing expectations for how your session runs. In addition, your students are only one or two years younger than you, so there's no reason to pretend they aren't basically your peers.

Before doing any icebreakers (I'm a fan of the speed dating model, myself), make sure to introduce yourself, but go one or two steps deeper than your typical hometown, major, one or two extracurriculars, and the fact that you like to watch Netflix. Include something that you are going through, how your schedule is looking this semester or something you're genuinely excited about outside of chemistry. Again, some students will follow your lead and this can help break people out of simply going through the motions during icebreakers.

Going along with putting yourself out there, another expectation you want to establish in your session is that mistakes are not just okay, they're actually a necessary step on the way to understanding the material in Gen Chem. So make that point explicitly early on, but I think the best way to make others comfortable with mistakes is to be very clear whenever you make a mistake. I always called it out, but not in a way that was putting myself down. I just made sure to acknowledge "look, I make mistakes too and I'm the mentor!" Before long, I heard my students getting a lot more comfortable acknowledging their mistakes or vocalizing their answers even when they knew they might be wrong.

Another way to get people comfortable is to set aside the last 10 minutes of the session for socializing, no matter where you're at in your problems. Definitely do this for the first 2-3 weeks. It will help them get more comfortable with you and each other and leave them with a positive feeling about PLTL or mentoring, excited to come back the next week. Plus, it doubles as a good lesson in the value of taking a short and intentional break in your studying. Later in the semester when work piles up you may start to run out of time for these breaks, but by that point you may already have received the benefits of that time spent early in the semester.

Hopefully these tips are helpful, but more than anything, if you want your students to put themselves out there, you have to put yourself out there. This can be hard, especially if you are nervous in the first couple sessions of the semester yourself! But you can't expect your students to push through that

nervousness if they don't see you doing that yourself. So take a deep breath before your first session, share a little more of yourself than you would normally, and bring some genuine enthusiasm because you can make this into more than just a 2-hour study session for both you and your students.

Worst-Best Behavior**By Marisa Ilag**

After leading your first few sessions of PLTL, hopefully you have been able to overcome those beginner's jitters and have a newfound confidence when it comes to facilitating. Now that you are more comfortable interacting with your group, you are able to focus more on each individual's learning style and personality. These aspects are not always easily visible at the very beginning of PLTL. Indeed, over the course of the first few sessions, the overall group dynamic will appear to gradually change, as certain students, like you, become more comfortable participating and voicing their ideas. Of course, no PLTL group is exactly the same, and because of this, each PLTL leader must utilize a unique style of facilitation in order to best work with their group. However, although each student is different, there are certain categories of learning styles/personalities that show through across many groups. By knowing how to properly work with these various types of students, PLTL leaders will be able to facilitate sessions that are beneficial for all.

More likely than not, your PLTL group consists of at least one "Dominant" student. A dominant student is certainly a good addition to any PLTL group, because this student often actively participates. However, problems may arise when these students begin to take over the group, becoming almost a type of lecturer to the rest of the group. One of the greatest features of the PLTL program is the opportunity it presents to collaborate with other students in order to work towards a common solution. This opportunity is withheld from students whenever a dominant student chooses to take over the session. In order to best keep this in check, there are a few things you can do. Firstly, it is extremely important to always direct conversation back to the group. Dominant students often will assert their answers as correct, and one way to spark further discussion is to ask for the opinions of the other members. Additionally, making an active effort to ensure everyone speaks at least once throughout the session can really help to foster a more balanced discussion.

Another quite common type of student is referred to as the quiet student. As the name suggests, these students tend to move through PLTL without really speaking up. There are many reasons for a student to act reserved, ranging from a lack of confidence in their answers to a misunderstanding of the material being covered. In either case, it is important to encourage these students to speak up, because it is only through interaction with the rest of the group that these students will be able to truly get the most out of PLTL. There are some specific strategies that can be implemented by PLTL leaders in order to help

incorporate these more reserved students into the group discussion. For example, one useful strategy is to have the quiet student summarize what the group just discussed or how the most recent problem was just solved. This allows the student to practice speaking up in front of the group, and hopefully over time the student will become comfortable enough to start volunteering his or her own ideas. Additionally, calling directly upon the student can sometimes be the most helpful. As long as this is done in a respectful and non-intimidating manner, this can also provide the quiet students with that much-needed “push”.

All in all, your experience with your PLTL group will be completely unique as compared to that of another group's. Facilitating such a diverse group of students can at times be challenging, but the key is to make sure that all members are given the chance to voice their opinions and engage in discussion. Your job as a PLTL leader is to provide each student with that chance. By doing so, you will easily become the “Best PLTL Leader They Ever Had”.

"Ever Since I led the session, you...."**By Joanna Kim**

Now that you are few weeks in PLTL, the group dynamic probably has been set and the students are comfortable discussing/asking questions to each other. As the group establishes itself, you may notice that there are couple different “categories” that your students separate themselves. Usually, some are more talkative while the others are more reserved. This is the part where you come in as a peer leader to mediate certain situations to make your group more interactive and get everyone to participate.

The two biggest categories that most students fall into are “dominant students” and “quiet students.” First off, don’t be afraid to cut students off when they start to take over the problem! By letting the dominant student carry on with an explanation without checking in with other students, it may leave you in a tricky place where you are completely sure whether or not everyone fully understood the problem. By politely interrupting the dominant student and asking others to explain different parts of the problem, you can make sure that everyone is on the same page and understood all concepts behind the question.

If the student cannot come up with reasonable explanations, this is where your probing questions come in! By directing questions to different types of students, especially quiet students who do not participate much, you can allow everyone to contribute to solving the problem. You may even want to utilize “Round Robin” strategy when asking students to explain a problem after solving the problem using “Small Group” strategy. I found it helpful to have students put down their answers up on the board after so that we could all follow along the explanations. Using round robin after a question allows every student to participate and contribute a bit to the problem – it is truly a group work to solve the strategy! This way, both quiet and dominant student can equally contribute to the question and create a leveled learning environment.

When using “Small Group” or “Pairs” strategies, grouping different types of students together may be really helpful in making quiet students to participate. Because they are placed in a smaller group, they are somewhat forced to contribute their thoughts. Grouping quiet students together and the dominant students together is a simple solution to get everyone to have a say in how to solve a problem. You may find that the dominant students finish solving the problem first – simply ask them to put their solutions up on the board. This will give more time to the groups that are not quite confident in their answers and need more time to discuss amongst themselves.

One the biggest struggles that I had with my PLTL was the “bored” student. These are students who

are very familiar with the material. They might seem annoyed that other students are not able to understand the question and start working on the next problem on their own. As a peer leader, don't be afraid to tell them to refrain from moving onto the next problem! Remind them of the PLTL philosophy and how this is supposed to be a group effort. Another method of dealing with these types of student is to ask, you guessed it, probing questions. Bring up different concepts and allow them to think beyond what is presented to them. All else fails, you may even ask them to write down their explanations to their answer in couple sentences, just like they would on a test. A lot of students find it hard to put their thoughts down on the sheet while they understand the concept mentally.

Finally, there may be students who are very relaxed about PLTL; in other words, they may come in 10-15 minutes late or go on their phones. As a leader, you are responsible for making sure that the PLTL philosophy is carried out throughout the semester. Setting rules such as "no phones" or even sending out a general email to be on time could be ways to mediate this problem. By directing the concerns to the entire group, you can avoid singling out individuals. If this pattern continues (even with the emails and gentle reminders), don't be afraid to ask the student to stay behind and talk to them personally about what is going on.

Speaking of which, if students seems to struggle with a concept or are frustrated with the material, connect with them! Statements like "I know this is hard, and I've also struggled with this when I took Gen Chem" can really resonate a lot with students and allow you to connect personally with the students.

The group dynamic is an essential part of PLTL and by being a peer leader, you play an important role in establishing how the students work with each other for the rest of the semester. By asking probing questions and thinking of mediating different types of students, you can ensure that your PLTL group can effectively adhere to the PLTL philosophy for the rest of the semester!

Chemistry has never been reckless – it's always calculated**By Momo Oyama**

By this time, I hope you and your students are starting to feel more comfortable working with each other, asking questions, and engaging in discussions. However, this is also the time that you may be starting to see the different personalities of the students shine through: some good, some not so good. One type of student who is inevitably in every group is the student who refuses to do any calculations. This student may be engaged while the group discusses how to approach the problem; however when it comes time to actually plug in the numbers, instead of pulling out the calculator, the student pulls out his/her phone to kill time. This type of student can be extremely frustrating to deal with, not only for you as the leader/mentor, but for the other students as well. Therefore, whenever you suspect that your group contains this type of student, it is important to address the issue quickly before the student becomes too comfortable.

One approach is to emphasize the importance of using the course-approved calculators. For many students, their relationship with their chemistry-approved calculator is very new. Coming off of their well-established relationship with their high-tech, graphing calculators that they were used to using prior, they still have yet to learn the quirks and nuances of their new calculators. What you can do early on in the semester is to stress the importance of practicing using their new calculators so that when it comes time to take the exam, they know where all the buttons are and what functions the calculator can and cannot do. Addressing the entire group in this way early in the semester will motivate your students to do each of the calculations themselves, and will give a hint to your calculation-refusing student that he/she should be doing the calculations along with the rest of the group.

If this is not enough, a more direct approach may be necessary. A student who refuses to do calculations can only get by if the other students shout out their answers first. This is where your authority power can be used. When it seems like the students are finished calculating out a problem, call on the student who refuses to do the calculations first to give the answer he/she got. This will obviously be an uncomfortable situation for any student who did not do the calculations, so hopefully they will learn their lesson that they need to do each calculation themselves. Alternatively, you can ask the student to write out his/her work on the board, again forcing the student to realize that he/she must do his/her own calculations.

Again I'd like to stress that addressing this issue promptly is important for all parties involved. It is important for your sanity (because eventually this type of student will start to drive you crazy), for the other

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students (because who wants to work with someone who just copies down your answers?), and for the student him/herself (because learning how to quantitatively solve problems and learning how to use the calculator is incredibly valuable for a successful Gen Chem career). I hope these tips help address issues that you may be experiencing in your own groups. Sometimes you will have to get creative, but don't be afraid to use your position as a leader/mentor to ensure everyone has a happy PLTL/Peer Mentoring semester!

Ever Since I Led the Session, you...**By Tanvi Puri**

Leaders, congratulations on getting through your first session!! The nerves get better the second time around, I promise. As you go into your second or third session, you will probably see some very distinct personalities emerge. It would be unfair to judge a student based on one or two interactions, it is important to keep an eye out for potentially problematic situations that may arrive soon.

There are many types of students, and while you may not come across them all at once, you'll probably have at least one or more in your group this fall. There is the dominant student and the quiet one, the student who's watched every lecture twice and the one who hasn't gone to class all week. As a good peer leader, one of your main goals this semester should be learning to deal with all these types of students and enabling them to participate equally in a group discussion.

Like some of my wise predecessors have said, the dominant student is the GenChem version of a diva. This student may rush to answer all your questions, or participate in round robin out of turn, or interrupt/talk over others regularly. The dominant student may know the content very well, and is therefore comfortable talking about it. Alternatively, they may just be uncomfortable with the silences that tend to occur right after a question is asked, and speak out as a response. I found the latter case to be less frequent, but more potentially harmful in group discussions. The student may have completely incorrect information, but can say it with such authority that the rest of the group begin to doubt themselves. Then there are the quiet ones. Just because a student is quiet in group discussion doesn't mean they haven't studied or aren't familiar with the material. Often the most brilliant of students can go unnoticed in PLTL because they're quiet. You may even come across an apathetic student who doesn't care about group discussions but shows up and just sits there, although this is rare.

The collaborative leaning strategies were my best tool in dealing with these situations. Scribe is a great tool if you find that your dominant student seems to be running away with the conversation. Scribe puts the dominant student at the board and gives other students a chance to talk while keeping the dominant student engaged. This strategy falls apart when you have two or more dominant students in your group though. Where one dominant student left off, the other one picks up.

At this point, I would recommend running the group as a mix of scribe and round robin. Having one dominant student at the board, with the rest of the group contributing one small piece of the puzzle going around the group in a circle. This ensures everyone contributes equally, and you can control the discussion

slightly more. However, every question shouldn't be run in the same way, different collaborative leaning strategies work better for different types of questions. It's important for the dominant student to realize that they need to allow everyone else to also talk. If the situation persists, don't hesitate to speak with them after the session and hint that they might need to slow down. While it can be awkward, and quite frankly for me, nerve-wracking to initiate this conversation, it is essential that the student start to correct their behavior before it starts to affect the group negatively.

Getting the quieter students to speak up may be hard without seeming like you're calling on them. There are two ways to deal with this—first, call on everyone equally! Make it a habit to ask people questions, so you're not singling out any one student. This works well in a large group discussion like round robin or scribe. When working in small groups or pairs, you can pair two quiet students together—that way there is no one to take over the conversation, so they will have to speak up eventually. Asking a quiet student to recap what has just been said in a 'justify' type question can help them gain confidence speaking without putting too much pressure on them. Use the interrogative assignments that Dr. Daschbach hands out—asking thoughtful questions forces students to think, and since there is no one correct answer, asking a quiet student to give their perspective makes them open up.

Student personalities can change a lot through the semester. Quiet students may come out of their shell if they get a confidence boost from a good exam, and dominant students may stop talking altogether. Keeping an eye out for changes will let you see whose confidence you may need to boost most in a session.

I end with this: do what feels natural to you. You are here because you have been carefully selected from a group of your peers. It is essential that you believe in yourself—if you don't, your students certainly won't. Trust your instincts, you will figure it out. And rather importantly—have fun, and good luck!

Best Group You Ever Had**By Anjana Rajan**

Congratulations on finishing your first session as a PLTL leader! Honestly, the most nerve-wracking part is over. Now, your job as leader is to create the most effective environment that is conducive to learning, collaboration, and fun!

Even after just one or two sessions, I'm sure you have a pretty good idea about your students' personalities and tendencies. One type of student to look out for is the dominant student. These students will participate a lot during group discussions to the point where others are not able to contribute their thoughts. As a leader, it's very easy to just let this dominant student explain the problems because anything is better than the awkward silences that often occur. However, it is vital that the dominant student doesn't take over the group. In my session, I assigned my dominant student to be scribe. This way, all other students had the opportunity to speak up, especially the quiet students.

The quiet student is easy to spot because they just never speak. These students are especially noticeable when a quiet student is paired with a dominant student. The dominant student takes over the conversation and the quiet student usually nods in agreement. To fix this, when assigning small groups or pairs, pair the quiet students together. This way, these students are forced to speak with each other to figure out the question at hand. Even though calling on students is scary for them, I thought this strategy was a good way to force quieter students to participate and at least say what's on their mind. I made sure to establish at the beginning, though, that it is okay to be wrong and any suggestion is more helpful than nothing at all. This tactic also helps in silencing the dominant student since the leader now controls who speaks next.

A final type of student to look out for is the distracted student. You know the one that's always on his or her cell phone checking Facebook or texting friends. I didn't want to enforce a no cell phone rule. But, I incentivized them by saying if they got through a few problems with no distractions, we would take a short 5-minute break where they could use their phone as much as they wanted. This way, my students didn't completely hate me and we still stayed on task. One of my students often got distracted during small groups when the other two members would talk and the third student would sort of look around and not really contribute. To fix this, even before the students began working on the problem, I would tell the usually distracted student that he or she would be putting up their work on the board. So, this forced the student to pay attention.

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I hope now you have a few solutions in your pocket if you encounter any of the students I described above. Just remember to be kind, understanding and patient and everything will fall into place! If you continue to believe in yourself and your group, it could be the best group you ever had.

On My Worst Behavior

By James Weatherseed

At this point you have probably started to notice certain dynamics forming in your group. Some students are more likely to contribute while others sit back and listen. Managing these roles is extremely important, as they lead to a more unified and therefore constructive session. In almost every group you will have at least one student who thinks they are the smartest person in the room and feels the need to prove it. The dominant student is a struggle to handle, but with the right methods you can make them into a useful member of your PLTL.

First of all you are going to want to limit the amount they can speak. Dominant students will always keep talking if you let them and it is important that everyone in the group has a chance to talk. You can achieve this through many different methods, but most simply you can ask them to stop and let someone else contribute. Remember, all of these students are in university now and their actions should represent that maturity. As long as you are polite with your students there is no reason why you should feel uncomfortable asking them to let others talk.

Another useful method is to use the collaborative learning strategies to your advantage. All of these strategies were designed to promote group learning over individual learning. When you come to a scribe question, nominate the dominant student to be the scribe. That way they will not be able to speak and must allow the rest of their group to solve the problem. Be sure not to choose this student every time there is a scribe problem though, as this can easily lead to them becoming frustrated.

You can also make use of the round robin strategy when trying to limit a student's talk time. Because each student is only allowed to offer one piece of information it forces the dominant student to slow down and listen to the rest of the group. This strategy is usually not a very popular one in PLTL, but there is no discounting its effectiveness.

With pairs and small group it is important to put the dominant students together. Especially in the beginning of the semester, when your students don't know each other very well, the quiet students will be unlikely to interrupt the dominant students. For this reason it is useful to pair dominant students together in order to force them to listen to each other. Additionally, when pairing quiet students with each other you almost force them to talk, as they will not get much work done independently.

If you have a situation where a dominant student is working with a quiet student, don't panic. Move around the room and talk to the separate groups about how they are trying to complete the problem.

When you come to the group in question be sure to ask the quiet student about their layout so that they have to explain what their group has done. Additionally, you can ask the quiet students to write their work on the board once their group has finished. This will let you know whether the student simply sat and wrote down what the dominant student said or if they truly understand the material.

With these methods for containing the dominant student, you are well on your way to becoming a fantastic peer leader. Just remember, you are in charge. While it may seem strange telling other students what to do, you have to maintain a sense of authority. You have to use this authority to keep your sessions on track and your students focused. Good luck!

Just Hold On, We're Going to Collaboratively Learn**By Maddy Drolen**

At this point in the semester, you have probably realized that Round Robin causes a bit of anxiety for you and your students both. Round Robin is a great collaborative learning strategy to use because it requires participation from all students, which fosters a more comprehensive discussion of material, but it is difficult to manage as a facilitator and it can cause some stress for students. Perhaps at the beginning of the semester you will be very sure to adhere to the rules of Round Robin by going around the circle of students and asking each for one piece of information to contribute. As the weeks progress, it will seem easier and easier to let students pass when their turn comes or to let it slide when students end up answering the rest of the question instead of focusing on one particular step to contribute. However, it is important not to let your Round Robin problems devolve in this way because the benefits of this strategy can be great!

For me, Round Robin always made me slightly nervous because the rules were stricter than those of the other strategies. I did not want to allow my students to slack on this and then feel like they could slack on other strategies that were easier to implement. So I tried my best to always go from student to student calling on each and attempting to restrict their input to one piece of information. Quickly, though, I realized that this strict adherence to the guidelines of Round Robin were limiting the discussion occurring within my group while also making some students who were generally quieter and less confident with the material feel pressured and anxious when their time to contribute arrived. In order to improve discussion and make my students feel less singled out and nervous, I decided mid-semester to shift how I conducted Round Robin.

Instead of going around the circle one by one I told my students that we would be doing Round Robin popcorn style, meaning that after one student has given a piece of information they can call on whoever in the group they wanted to speak next. If someone had something crucial to add to the conversation, they typically found a way to indicate that they should be called on, which helped make a more productive conversation. If no one had anything in particular they really wanted to contribute, the person who spoke last usually just randomly called on someone. This, along with my encouragement that everyone still needs to speak at least once within our attempt to work through the problem, allowed everyone to contribute while keeping the pressure from being cold-called low. By switching up the order of people who participate, my students were kept on their toes and thus had to be engaged with what was going on in the group and not working ahead on the problem independently. Also, if you ask people to constantly be putting things on the board, the activity of people moving around will help students stay on

track collectively with the material. By initiating the popcorn strategy, hopefully you will be able to create more spontaneity and engagement with Round Robin while also decreasing the stress that can sometimes accompany it.

While the popcorn strategy may seem to allow dominant students to remain more dominant and quiet students to remain more quiet than the original guidelines of Round Robin would have allowed, this is where you come in. Before beginning a Round Robin question, remind your students that while you might not be the one calling on students, everyone should be participating. Don't be afraid to give them reminders while they're solving the problem to quiet down the more dominant students. You can also ask specific people to clarify or to summarize what has been going on in order to engage some of the quieter students that may not have been called on yet.

All in all, my advice is to know your students and how they interact with one another and the material. From there, you can tailor how your group proceeds with each collaborative strategy that will best allow your students to engage with the packet. Don't be afraid to switch things up mid-semester and play things by ear! No two PLTL groups are the same, so no two implementations of collaborative learning strategies need to be exactly the same either. I hope my experience with Round Robin can help you figure out the best way that your group approaches learning strategies!

Next Level Leading

By Andrew Friedman

Congratulations on becoming a PLTL leader/Peer mentor! Hopefully by now you have a few sessions under your belt, and have started figuring out the dynamics of your group. Now that the big picture elements of running a group are out of the way, the key to running a successful group is to sweat the small stuff. I'm here to offer up some tips on how to make some of the collaborative learning strategies and the overall feel of the group run more smoothly.

The most important thing to realize about PLTL is that it can actually be kind of fun. Bringing a positive attitude (and food) can go a long way to making the atmosphere warmer. Baking treats during exam weeks and spending some time joking around and talking before/during/after the session may seem like a waste of time at first, but creating a fun feel to the sessions allows them to run a whole lot smoother.

During the session itself, always make sure that you have a probing question or two at the ready. Actually reading through the interrogative assignments and preparing a really good probing question of your own to go more depth into one topic can add a lot to a problem. Often times there will be a question in small group or pairs that the group will fly through, and challenging the group on the more fundamental elements of *why* something works the way that it does can generate some good cross conversation in your group.

Another tip to try during small groups or pairs is to walk around the room and observe each group up close. This can allow students to ask questions that they might not ask in front of the whole group, and it's a way to get a feel for which students work faster and slower. Another tip that was very helpful for me once I figured it out was having groups go up and write their work on the board when they were done with a problem. This gives students who work quicker something to do as the rest of the group works, so that a few students aren't sitting around waiting for their peers for half the session.

Hopefully some of these tips will be helpful, and allow you to take your peer leading to the next level! Best of luck.

Best (Scribe) I Ever Had**By Daniel Knudsen**

Hi new leader! I love many aspects of peer leading, but my favorite by far is the fact that we have an arsenal of collaborative learning strategies at our disposal. If you have not noticed already, these strategies are extremely powerful tools. By virtue of being implicit in the fabric of PLTL, your students will accept the strategies as fact and as divine commands handed down to them by Dr. Daschbach. This may not seem important at first, but it plays a crucial role in your use of collaborative learning strategies – namely, your students will go along with the weird ways in which you force them to work with one another.

Given your students will not question your use of these strange strategies; you can fully take advantage of them in session. While there are many equally valid ways to conceptualize how you lead your session, my personal favorite is to see PLTL as a game, where tactical use of the collaborative learning strategies helps everyone win in the end. Some strategies are useful because of their basis in cognitive science. For example, using diverse learning styles by alternating pair, small group, and whole group activities challenges students to engage and think in different ways, and learn to shift between relying on themselves and drawing on others for knowledge. Round Robin is useful as a tool for putting pressure on and engaging with each of your students by creating a sense of urgency (and occasionally fear, honestly).

My favorite strategy, however, is Scribe. Though it has usefulness via cognitive science too, it particularly appeals to me by its versatility as a tactic for managing a group mid-session. As a personal preference, I do not take volunteers for scribe; it can lead to the same students volunteering every week, and others going the entire without taking a turn at the board. In my experience, this can reinforce bad behavior in which the always-scribes do not feel as much pressure to be prepared for session, and in which dominance is encouraged in the never-scribes. To avoid these issues, I personally have found the best strategy is to assign scribe based on a plethora of factors including how the session is going, which students are dominating, which are silent, and how many times a student has been selected for scribe relative to the others. For me the key, however, is to act as though I am picking at random.

Scribe is an incredibly effective tool for several scenarios. When I have a student who is clearly clueless on a concept because they did not attend, lecture, are highly confused by a particular topic, or any other reason, I often times find it more productive to place them in a scribe role where there is less pressure on them to contribute. Though it is important to push students to their limits, it is not productive to make a student unhappy and uncomfortable. On the other side of the same coin, scribe is also very helpful for mitigating the effect of a dominant student on the session. I also found that scribe is even

effective for dealing with a session in which multiple students are being over dominant. Oftentimes a tricky but useful implementation of scribe is to split the problem between two dominant students, switching the students halfway through. This not only keeps the students occupied during the problem, but also forces them to spend time copying down the problem once their turn at the board is over, which keeps them from suppressing other students. Finally, in the situation where students are relying too much on you for direction through the packet, remember there is no rule saying you cannot volunteer yourself for scribe!

Now go forth, take the tools collaborative learning strategies offer, and make Drake proud!

And We 'Bout this E'ry Day (Next Level Leading/Mentoring)**By Sih Oka-Zeh**

So you've been leading your sessions for a little while now. You might have gotten into a routine with your students and you're beginning to learn not just who they are and how they learn, but how **you** facilitate discussions. If you were wondering, you're doing a great job. That being said, there is always room for improvement, I mean, come on; You're new!

I'm sure you've realized by now that leading is not just something you do for 2 hours on the weekend and 3 hours (divided between SAM and PAM) during the week. If you haven't been doing so already, make sure to review your notes from when you took Gen Chem. Go over the old problem sets and look for things that you might have struggled with and practice them. Really use PAM as a tool to ask questions and never be embarrassed to ask your peers something you might think is "trivial" or "basic." The senior leaders will have good suggestions as to how they've led their sessions in the past and will have good insights as to what types of questions you should try to ask throughout your sessions.

SAM is also a great opportunity to hear what has been going well and not so well in other sessions. Don't be embarrassed if something didn't go as well as you wanted in your session ; you and your fellow leaders are in it together, so try to share to prevent the same mistakes from happening or if something went really well, to help them reproduce a great outcome. Even if you feel like you don't have anything to say in SAM, listening can still help you prepare to interact with your students on a more personal/peer-oriented level.

Even though it is still pretty early in the semester, now is the time to start developing good habits in your session. Keep your students off their phones if they become distracting. At the beginning of sessions, make small talk, maybe suggest an event on or off campus; ask about the things that they may have expressed interest in and really get to know them. After a few weeks you can easily establish that you do have a comprehensive knowledge of the material, but make sure they know that it didn't just happen one day, that you worked hard throughout the semester with your peers to get to where you are. Encourage them to use the endless number of Gen Chem resources and to use General Chemistry as a way to learn how they learn.

Before sessions, it is usually a good idea to email your students a day or two before. Email can be a powerful tool. My emails would have the topics we would cover in that session, what they needed to bring, and any additional things we would talk about if we had time like exam tips, clarifications from the professors and if you want to incentivize them, the snack menu for that session. You can even send out

surveys about how the sessions are going, helpful videos or diagrams or just funny videos before exams to lift their spirits a bit.

During sessions, depending on the size of your room, you can make good use of the space. One leader I know of would have her pairs or small groups work at different tables that she arranged before the start of her session which prevented groups from overhearing and being distracted by the work of other groups. If you are in a smaller room, then it is still possible to split up groups; you can use dividers, have people work on different parts of a problem (if the problem permits), or give them various terrains to work on (table, floor, chair, etc.). As ridiculous as some of this sounds, it may truly benefit the students in your group by forcing them to at least attempt the problems on their own.

While your students are doing the problems, go around and ask questions, especially if you see that one or more of the students are being left behind. It can be beneficial to ask the student who is working ahead to explain his/her process in attempts to slow them down, but that may take away the other students' opportunity to think through the problems themselves. In that case, ask general questions right from the get-go.

Don't forget that these sessions are for them, keep them working together rather than alone, or against each other. That have them work through problems together, but also explaining concepts to one another, asking each other questions, and maximizing the benefits of a group setting. That being said, make sure they know that you are there to help in and out of the sessions. You are in a position to facilitate their Gen Chem education and problem solving skills, but also their next few years at WashU.

Know Yourself, and Your Group

By Mani Raman

Before I say anything else, congratulations on becoming a PLTL leader/Peer Mentor! By now, you have probably realized there is way more that goes into being a PLTL leader/Peer Mentor, than just bringing food in, asking probing questions, and sitting back as your group works through the packet. Trying to promote good group dynamics while managing your own work for the semester can be challenging, but trust me when I say that you were picked to be a PLTL leader because you are capable of doing this job well. So don't get overwhelmed, and know that SAM and PAM are great support systems. That being said, I found the SAM book and discussion board very helpful last year, exploring all sorts of situations new PLTL leaders face.

Personally, the biggest challenge I faced last year was being able to balance out my group. I had 3-4 dominant students as well as many quiet students, so it took me a while to figure out how to bring out the best in everyone. The learning strategies that helped improve group dynamics, and gave me insight on which topics to focus on were Small Groups and Pairs questions. I just want to give you a couple suggestions that worked for my group last year, but I encourage you to get advice from other leaders and modify these suggestions in whatever ways that work for you.

The greatest asset to using Small Groups and Pairs is that they work for any size group, and get everyone to participate without putting anyone on the spot. One of the hardest parts of this strategy is deciding who is in what group. A common suggestion is to put quiet students in one group, and dominant students in another group. This is an excellent way to hear more from your quiet students, and to figure out what each student's strengths and weaknesses are for that week's topics. At the same time, it also prevents the dominant students from taking over the problem completely since they are with other dominant students. The two things to keep in mind, however, when grouping your students in this way is that every week, the dominant and quiet students may change week to week since everyone is unique and will be better at different topics. For example, one student may be dominant the week in a week that is math-heavy, but may become quiet in a week that involves a lot of 3D visualizing. I know this is hard to gauge, but as you spend more time with your group, you will be able to get to know each individual student's strengths, and weaknesses, which will help you decide what groups to place them in. Another thing you want to avoid is always putting the same two or three people together. The PLTL program is about giving first-semester freshmen an opportunity to be part of a community. The best way to encourage this is to mix the groups up, so that everyone is forced to talk to everyone else. Feeling comfortable with ten people rather than just one

or two will really help freshman feel part of the Wash U community, while improving the group's cohesiveness.

Another strategy I used was to talk to each individual group. This helps you get a sense of where your students are and what you need to discuss in detail as a large group. It is also a great way to get inspiration for what types of probing questions to ask. Walking around may or may not work for you. For some leaders, walking around has been a way to make sure that all the groups stay on task, but other times, some students may not feel confident enough to take risks, and ask questions if you are standing right behind them. Generally, if my groups got stuck, I brought all the groups together to give groups the opportunity to help each other. Other times, however, it worked better to ask probing questions to individual groups. For example, if each group has a completely different way of approaching the problem, it might be more beneficial to ask probing questions to each individual group and then compare strategies at the end, rather than to bring everyone together at the beginning, which may end up confusing the students.

One issue that happened repeatedly at beginning of the year was that the small groups would fuse together to form one large discussion that was once again run by the dominant students, defeating the purpose of small group questions. To prevent this, I started physically separating the groups, so that they sat in different corners of the room. Even though my students complained about moving, physically separating my groups forced each group to work on their own. If you find that even within a small group, people are working individually, tell group to write down all their work on one piece of paper. This will encourage your groups to be more cohesive and work together.

My last piece of advice would be to monitor what each group is doing. A lot of times, one group will finish a lot quicker than the others, and the students in this group will either start going on their cellphones or distracting the other groups. One way to deal with this is to make that group put up their work on the board, giving the other groups more time to work on the problem, while occupying the group that is finished.

Small Group and Pairs questions are very powerful, and can be extremely beneficial to both you and your students. I have seen leaders do a variety of things when it comes to small groups. Remember that you know your group the best, so play around to see what works for your group. As in the words of Drake, "it takes a million compliments to build you up, and one insult to send it all crashing down", so try your best to be sensitive to everyone's feelings and opinions. I think the key to success lies in having your students be comfortable with both you and with each other, so do whatever you can to make your students feel at home during PLTL. Know Yourself and Know Your Group. Take Care, and keep up the great work!

YOYO in Peer Mentoring

By Sophia Shi

As a student, you might have rolled your eyes at the collaborative learning strategies that were constantly used in your mentoring groups. However, as a leader, you'll quickly learn to appreciate how these strategies can be used to adapt to your group's learning style and encourage every student to participate and interact. Although the purpose of these strategies may not seem so obvious at first, a bit of trial and error and refinement goes a long way in meeting your group's needs.

As a peer mentor, I have to admit that I often struggled with implementing these strategies in my own group. Since the structure of our sessions are quite different, peer mentors don't typically use "Scribe", "Round Robin" or pairs/small groups explicitly. Nevertheless, I came to realize that the general idea behind these strategies were still applicable. Regardless of whether or not you are a PLTL leader or a peer mentor, mastering the collaborative learning strategies will help you foster that student-driven, inclusive and welcoming environment that we strive for as academic mentors.

Most of my own peer mentoring sessions, especially the concept review portion, were something similar to "Round Robin", where I would try to ensure even participation by getting students to contribute little bits of information and combining them to get the overall picture. This was usually pretty effective in my group, except when lack of participation and the dominant/quiet student dynamic were issues. I initially hesitated to call on students to come up to the board or explain their reasoning, but I soon realized that it was necessary at times. The key thing here is to be careful of calling on the quiet students too much, because they may feel singled out. Calling on quiet students frequently but also calling on dominant students regularly is usually a safe way to go. Another strategy that worked well during concept review was asking other group members if they had a different way of explaining things after a dominant student would answer a question. This would give other students the chance to formulate their thoughts, and the group would reach a deeper understanding of the concept as well.

Though most of the time in my sessions were occupied by concept review, pairs/small groups really came in handy during the problem-solving section. At first, I would get the students to work individually without talking to each other, but then I realized that some of the students would stare at the problem and not even know how to begin working on it. After splitting up the students into pairs/groups, I quickly noticed an improvement. This was especially effective if I paired dominant students together and quiet students together. The quiet students would open up and discuss how they arrived at an answer, and the dominant students wouldn't allow the others to complete the whole problem by themselves.

Overall, I think the most important thing about using collaborative learning strategies is figuring out what works best for the dynamic of your own group. Don't stress too much about using them all perfectly at first—it'll take some time and experimentation! Trust me, before you know it, you'll have a great sense for effective ways to deal with all sorts of situations in PLTL and peer mentoring.

The Catch Up

By Saronawit Belay

At this point, you should have already establish a solid group dynamics and your students should be comfortable around each other. The next step is developing a growing mindset to ensure that every session is an active learning environment. Whether you are a PLTL leader or a peer mentor, one of your most important responsibilities is maintaining an environment where everyone is engaged in the group discussion and constantly encouraged to strive higher in understanding the given material. It is not just the quiet students on whom you need to focus. Even though those individuals require extra attention, be careful not to completely divert your efforts from the main goal of this mentorship program—teaching the students how to acclimate to the college course load.

One of the common misconceptions during the first year of college is that you either get or don't get the course material. Some students have a natural intuition for chemistry. Other students are natural geniuses when it comes to physics. Or the students who get the highest grades on midterms just have good genes with which other students weren't blessed. I hope you're noticing a trend here. The belief that people are naturally good at something is a complete and utter fallacy. No one is born with special talents to understand the mysteries of quantum mechanics or to breathe through the hardships of photoelectric effect problems. Those who seems to glide through these parts of the course do so because they approached the material with an open, inquisitive mind and put in the necessary hard work. These are the tools needed to go from 0 to 100, real quick, in Gen Chem or any other college course for that matter. It is important that all of your students understand this point.

As for your dominant students, there are two things you will need to watch out for and both can be very risky for the students' personal development as well as your group dynamics. Some students assume a stuck up attitude and pride themselves with the notion that they understand the course material or they know how solve every single problem on the PLTL/ POGIL packet on their own so they need not put in much effort in the group discussions. This is especially common for PLTL sessions. Instead of participating in the group problem-solving activities, these students work ahead in their packets and display annoyance when asked to stay with the rest of the group. Other students rush to explain how to do every single problem without giving the rest of the group a chance to work through it and display annoyance when the leader/ mentor asks them to chill. In both occasions, the dominant students are missing out on the chance to learn from their peers. Even though they know how to solve a certain problem, it doesn't mean that their way is

the only way. Another student in the group may have a different approach or a trick up their sleeves that saves precious time on midterms. Or the group discussions may lead to a deeper understanding of the concept at hand and make it easier to interconnect different topics as is required by many of the Gen Chem midterm problems. So by missing out on these group discussions, the dominant students are hurting themselves first and foremost. However, they are also hurting the group by creating a hostile environment.

All in all, it is important to instill the importance of adopting a growth mindset in your group starting from day 1. In order to succeed, everyone needs to understand that a person's basic abilities can be expanded and developed through dedication and hard work. Nothing is impossible. Even if a student understands the course material, it never hurts to learn from peers and strive for a higher understanding. In the wise words of Drizzy, "Never let success get to your head and never let failure get to your heart." Remember that you are a role model for your group so the best way to influence the students is by implementing these ideals in your personal studies as well.

Growing into a growth mindset: a skill all learners should have

By Yash Bhatia

I hope your PLTL sessions have been going well so far! At this point in the semester, you may have come to realize what I and many other PLTL leaders already have: first semester freshmen *hate* failure. And why shouldn't they? In a school system that is founded on conditional success, meaning that a student understands their success based on how they do relative to others, it is hard to be interested in the learning process rather than strictly grades alone.

Trying to instill a growth mindset in your students is a tall task, but it is so necessary for them to be happy, confident learners in the long run. Now what is a growth mindset, you may ask? A growth mindset (in the academic context) is when a student believes that they have the ability to grow as a learner, rather than having fixed intelligence.

Your students may understand that a growth mindset is the way to go, but how do we encourage them to have it? Below are some strategies I found useful as a PLTL leader while aiming to do just that!

- 1) Constantly talk about it- Every opportunity you get, plug in the term growth mindset. You have students dispiritedly talking about their last quiz or exam performance? Challenge them not to approach that score as a fixed measure of their understanding on a topic, but rather as an indication that they may need to change their study approach, and as an opportunity for growth.
- 2) Value the process, rather than the end result- After your students complete a tricky problem, complementing the process of obtaining an answer (i.e. teamwork, problem solving skills, not giving up) rather than the actual answer itself is a great way to hone in on learning. Furthermore, it is key to communicate to your students that freshman year is about building a foundation for the future, including developing study skills and time management skills. Just letting them know that they should focus on improvement more than anything else as freshman can be reassuring and helpful.
- 3) Model the mindset- It can be very valuable to give personal experience about your own struggles in classes, especially if you had to consciously improve and change your approach to the class throughout the semester. This can make the concept of a growth mindset much more relatable for students!
- 4) Encourage your students to take risks- From the very first session, let your students know that PLTL is a time to be confused, a time to make mistakes, and a time to fail. Setting this standard from the

beginning will hopefully help them be comfortable with their group mates and be as open as possible.

I hope these tips help you create a great group dynamic as a PLTL leader, where having a growth mindset is commonplace. If you are able to create that sort of environment, any sort of test of knowledge (like quizzes and exams) will not seem so daunting and scary, but rather as another challenge to overcome. Remember, this is a hard characteristic to pick up, so it will take your constant effort throughout the semester to make it happen. If you don't see results at first, don't worry, just have a growth mindset about it and you can figure it out! I have full faith in all of you, good luck!

Best (Exam) I Ever Had

By Grant Black

It's that time of the semester again: midterms! Your students will most likely be feeling anxious about their first college exams, especially general chemistry. Some will play it cool, while others will stay up all night the week before studying until 2 a.m., but everyone will have the goal of crushing their tests. And why shouldn't they? You've been preparing your students for over a month to tackle all sorts of problems. However, some of the biggest "problems" don't have to do with the Bohr model or wave/particle duality; many students struggle with how to prepare for exams, and how to carry a growth mindset throughout midterm season. This is where you come in.

There are several things you can do to help your students study for their first midterm. First, make a concerted effort to go over the review questions at the end of each packet. You'll be surprised how easy students forget each topic after their weekly quizzes, but these questions will both help them remember as well as show them that they need to go back over old topics. Also, beginning the conversation about midterms two PLTL sessions before the test will give students an ample amount of time (about 10 days) to study. Share with your students how you studied, and what did and didn't work for you. For example, I found that going through every form of the quizzes was great at testing my knowledge, but reading the textbook didn't help me retain any information. You all have a year's worth of gen chem experience, so don't be afraid to share your tips and tricks!

Developing a growth mindset with respect to midterms is just as important as developing strong study skills. Not everyone will get an A on the first exam, but one test doesn't have to set the tone for the entire semester. Encourage your students to approach the exam with a positive attitude (they can drop it if they have to, after all). If your students don't perform as well as they expected to on the midterm, push them to try harder next time, not give up on the course for the rest of the semester. This concept also applies to those who do well on the first exam- urge them not to become complacent, but instead to continue to work as hard as they have been. Instead of viewing grades as concrete numbers, instill in your students the importance of improvement relative to past performances.

In your sessions following exams, try to avoid talking too much about grades or having students compare their grades. Generally, only the ones who did very well will want to share, and the others might feel isolated or inferior. Again, stress the significance of relative personal improvement and maintaining a positive attitude. They're in great hands with you!

0 to 100 (but I'm not talking about grades)**by Sarah DeCou**

You've probably arrived at the point in the semester during which your students (and, let's be honest, you) are feeling the full weight of schoolwork and responsibility on your shoulders. Being a student at WashU is downright DIFFICULT. It seems like the stream of exams, papers, quizzes, and assignments is never-ending, and it can be especially difficult to deal with for your students if they aren't getting the grades they want. Perhaps they think they have given it their all: they've put in hours and days and weeks of effort, they've stayed up night after night studying, yet the grades they are getting back on Blackboard are less than satisfactory.

As a PLTL leader or peer mentor, it's not only important for you to make sure your students are learning chemistry, but it is also important to help them navigate the difficult waters of their first semester in college. In my opinion, a major part of getting through college is maintaining or developing a growth mindset. It would be pretty discouraging to go through tough classes like Gen Chem without this sort of positive mindset.

A growth mindset encourages students to persevere through failure and to keep a positive outlook for the future. I find it to be especially important for peer mentors to discuss this with their students. The peer mentoring program is designed for kids without a strong background in chemistry or other hard sciences, and it is likely that these students may also be the ones to fixate on their minimal chemistry background as a huge disadvantage or roadblock to success in the course in college. If these students fail the first Gen Chem exam, they will probably get stuck in a negative mindset that tells them there is no hope for the coming exams.

At this point in the semester, your students still have at least one midterm and the final left to take. These points add up, and there is still a ton of room for grade improvement. While emphasizing this is important, it is also important to mention that their focus shouldn't actually be on the grades. Talk to them about what a growth mindset really means, and stress that it is their personal mastery of the concepts, not the outcomes, that really matters. In your sessions, I would encourage you to avoid talking about grades as much as possible, and instead shift the group discussion towards mastery of the material. Make a point to congratulate students who have explained a difficult concept successfully, and make sure your students fully recognize how awesome it is that they came to the session confused but left with a solid understanding of one or more concepts.

As a PLTL leader or peer mentor, you have the power to tell your students about a mindset that truly will change the way they handle failure and adversity in every aspect of college in the coming semesters. If students learn about the growth mindset now while they are a freshman, it has the potential to positively affect every aspect of their college lives moving forward. Always remember that your job is not only to teach chemistry, but also to be a mentor and role model for your students.

Harness your Growth Mindset

By Chris Edwards

After my first Chem 111 exam. I was distraught. I had received a C, and I was very concerned about my future at WashU. Had I not been inspired to push forward and learn from my mistakes in Gen Chem, I do not think that I would be as happy and successful as I am today. This class proved to be a pivotal moment in my college career-I learned how to take an “I” and how to rise up from my failures in all aspects of my life. It is important as a peer leader and peer mentor that you understand how to motivate your students to accept the fact that they won’t always do as well on exams as they plan, and that each test can be a learning experience to grow from.

In order to help your students recover from hard exams, it is important to help them build their self-confidence. Provide opportunities for all students to explain their correct answers, work on the board, and defend their logic. If they are always second guessing themselves in the short run (individual problems, ideas, topics, etc.) then they will never be able to set strong goals to work towards, or develop their growth mindset. That is, they don’t find ways to be sure in themselves, they won’t ever grow as a student. This is specifically the reason there is no answer key for the PLTL packets-they must learn to accept their own answers.

The growth mindset can be undermined in many ways, and you must be prepared to combat these forces. One of the greatest threats to the growth mindset is self-deprecation. If you observe any negative comments made by students about their work, intelligence, or anything about their performance in General chemistry, try to go out of your way to encourage these students to share their ideas and explain their reasoning to the group. It will help them develop clearer understandings of the material while also building their confidence. Remember when providing encouragement to always emphasize the dedication and hard work that the students have put in. Complementing and fostering a hard working attitude has proven to be much more effective at motivating students than complimenting how smart they are.

In the session after the first exam, I would take time to address all of the students at the beginning. Encourage them to go over their exams with the key and identify spots where they did well and not so well. It is important to stress that their grade on this exam (good or bad) does not indicate what they will receive in the class. Ask them to think about any improvements or changes they would like to make to their test prep for the next exam. Keep a positive attitude and to keep up the momentum

they have with their work. If any particular students seem overly confident, remind them that the material is always changing and requires a disciplined study schedule to stay on top of. If any students seem upset, reach out to them privately and let them know that Dr. Daschbach would love to meet with them to discuss study strategies and the course in general. Having this conversation before and after the first exam is vital to instilling a growth mindset, but don't forget to touch base with your group with every exam that follows.

I talked often of my experience in 111 with my first group of students, and it seemed to provide some inspiration for them. I explained how I changed my note taking style, increased my focus on problem solving, and worked to turn my C into an A. If you don't have a similar experience to share, no worries, feel free to share mine with your students if they are lacking in motivation.

Gen Chem Is the Best I Ever Had

By Connie Gan

I remember walking into my first peer lead mentoring session as a freshman and just being so nervous and in awe of this upperclassman that had done well in the classes I knew I would also take. And now, I realize that being a peer leader is far more than facilitating their learning of chemistry because during each session, they get a chance to learn so much more. These groups are a gateway for mentors to teach effective study techniques, to encourage the growth mindset, and to pass along advice about how to not only do well, but also flourish in Wash U classes.

Most likely by now, the students have taken a few tests and gotten their scores back. Many of them are freshmen and still figuring out how to adjust to college life and study for classes. Utilize your role as a peer to help establish the growth mindset towards classes, especially Gen Chem. As a peer who recently took the class, I like to advise my students about what I and other leaders did to study for the course and what I wish I knew before the large milestones of the course: first quiz, first exam, during midterm season, reading and finals week. The exams can be nerve wracking as it is probably the first time outside of the SAT or ACT they are in a large auditorium taking a test that is a combo of nerves and anxiety. Your and other peer leaders' insight will be taken to heart and can be very reassuring during times of stress.

It may be easy to study but how do you study smarter? As a peer mentor, the students look up to you so it is up to you to model good study habits and have a growth mindset. A quick strategy where the students could help each other out is if they shared with each other how they studied and how that worked out for them. From there, they can see if they would like to try another method and improve. As Drake says, "Doing it was one thing, doing it right is another thing."

One of the largest takeaways that will help your students achieve to be successful in all aspects at Wash U and beyond is mastering the growth mindset. The growth mindset mainly means to focus on mastering the material and improving one's personal understanding of the concepts, rather than focusing on results and grades. Because Wash U students are usually the top of their classes in high school, they may have never gotten a score back that was below the average or struggled in a difficult class like Gen Chem. They may start to feel discouraged because the concepts and problem sets are hard and they may not have done as well on a quiz or exam as they had expected to. They may be frustrated when they talk to others, feeling as if the tests and quizzes are impossible. Drake says, "Lately I feel the haters eatin' at my confidence, they scream out my failures and whisper my accomplishments." This is the opposite of what

they should do. Instead, focus on how each student can individually improve and provide positive feedback when they master a difficult concept. It doesn't promote group dynamics or individual morale when conversations are centered around grades. Steering clear of these negative discussions and focusing on personal growth will motivate them to work hard and continue to do so even if there are setbacks.

As a peer mentor, you can help students develop confidence in their abilities and give them advice about Gen Chem and other classes through positive motivation as well as help them develop a robust work ethic. You can help shape their success in school in general by offering a listening ear, empathy, advice during difficult times, study tips, and trust in group work for future sessions that may be PLTL or something they form on their own.

Started from the bottom (From 0 to 100)**By Shannon Jiang**

As peer leaders and peer mentors, we serve two roles that allow us to uniquely support our students. These two roles can be understood simply by unpacking its name. The primary role of being a leader and a mentor is obvious. Having taken Gen Chem before (and done well in the course!), we've learned personally how to approach the course and how to translate the material into a form that we understand and are comfortable with. We can share this experience and insight with our students and help them in a unique and individual way. The secondary role of being a peer is equally if not more important. Being peers of our students allows us to relate to them on a level that is much more personal. We've been through the same course and the same difficulties which allows us to understand exactly where the students are at. We all know the struggle of transitioning from high school to college. These two roles set us up to be in the perfect position to not only teach the students about the material but teach them strategies on how to approach exams and how to learn with a growth mindset.

Having a growth mindset insists that students focus more on improvement and cultivating intelligence instead of relying on what is perceived as a static level of intelligence. There is an emphasis on hard work and an enthusiastic persistence in learning that research shows leads to greater motivation in school and higher test scores. It is so important to encourage the students in your session to work hard and stay motivated and remind them that chemistry is not something that can only be understood by certain types of students, nor is it something that cannot be improved.

The best advice you could give to your students as a peer leader or mentor draws upon your own experiences and insights. Share with them how you approached studying for exams, what study tactics you used, and how you avoided or dealt with stress and failure.

I know for me, the way I approached studying for each exam of Gen Chem changed drastically as the year progressed. I remember spending by far the most amount of time studying for the first exam of Gen Chem, but also received my worst score on that test. As a freshman taking one of my first tests in college and receiving a grade that I was not satisfied with was very demoralizing. However, after the test, instead of thinking to myself "maybe I'm just not cut out for chemistry" I tried new study tactics and found different ways to prepare for the next exam. Making adjustments to my study habits after each exam correlated with an increase in my exam scores throughout the year. Much of these changes can be described by a shift in focus from passively reading through and memorizing my notes, to actively working

out problems and explaining concepts to other people.

We all have to start somewhere! Working from the first exam and making adjustments that cater to how you learn best is really the only thing we can do. As a peer leader or mentor, your opinion and your advice matters to your students! They can learn a lot from watching how you approach problems and from trying out different strategies that you suggest that might have worked for you. Hard work and patience are both skills that transcend a college course and are beneficial in all aspects of life. Teaching your students to have a growth mindset early on will not only help them to stay motivated and to succeed in the course, but will also help them to not only adjust to college level academics but life in general.

Hold On, We're Going Home

By Kelsey Barter

It's getting to that point in the semester when having a week without midterms and papers is nearly unheard of, and studying up on gen chem before your session may not be at the top of your priorities. However, your students are experiencing all of the same struggles—probably for the first time—which means they need your help now more than ever. It is really important that you continue to be prepared for your sessions because your students will follow your lead. You may need to even do a little bit extra—surprise your students with a snack on the week of Halloween to show them you care. I found that sending an email to my students before every session was a good way to hold them accountable for their attendance. It creates a sense of consistency for your students and seeing that email from you will at least prompt your student to respond and let you know if he/she is not able to make it. The same kind of consistency is important with regards to what time you show up to your sessions. You should be there on the hour (10 minutes before you technically start)—otherwise students will get the sense that you're not serious about starting on time and feel more comfortable trickling in a few minutes late. Personally, I was far from perfect at arriving on the hour and I think that contributed to the tardiness of my students especially towards the end of the semester, so be better than me!

Remember how nervous you were for your first session? I know I felt like I was under a microscope and was really careful about everything I said in the first session. Remember that although that first impression was important to set the initial tone for your group, the way you behave on a weekly basis is how your students will remember you. You—the successful gen chem student—are a role model for every one of your students. This should make you a little nervous (in a good way) because when you lead your session each week you are not just representing yourself or the chemistry department, you are showing opening up to your students and telling them how to be a successful WashU student. PLTL is a very casual environment, however if you start showing up every day looking like you just rolled out of bed or you always seem to be complaining about the next orgo exam, then you are not setting a good example. Though your mid-semester slump may be real, your role as a peer leader is to be a source of motivation for your students. You may even find that pumping your students up before their next exam does something to cure your mid-semester slump as well!

Towards the end of the semester I noticed that students had an attitude that their grade (and therefore their success in all subsequent pre-med classes at WashU...) was already set in stone, even though

they hadn't taken the third midterm or the final. It is important to continue to remind your students about the importance of growth mindset. This does not just apply over the course of their semester in gen chem, but over their entire college career. Maybe they aren't satisfied with the grade they believe they will end up with in Chem 111, however that does not mean that they will not do better in the spring semester of the class. One of the best parts about college is that it is a process. You're not supposed to get it right on the first try as a first semester freshman, which is why you have seven more semesters to try again with a blank slate. It can be really hard for your students to realize this, as they haven't been at WashU for very long and every choice they make or exam they take may seem like a matter of life or death. Part of your role as a mentor is to provide your students some perspective and support in their experience with Chem 111, whatever their grade turns out to be.

The Mid-Semester Slump

By Brian Chu

Sweatpants and falling leaves.
Everyone is giving up,
Even the trees.
How long has it been,
Since I've gone to class?
How long has it been,
Since I've worn actual pants...

Yes, it's that time of year again - the mid-semester slump. You've probably just gotten into the groove of things and started to figure out your students, but things are about to change. Your students are arriving late, if at all, and they are not as prepared as they used to be. Eventually you will find yourself leading an empty session... Hopefully it doesn't get this far!

As work starts to pile up for both you and your students, don't forget that being a peer mentor and leader is more than just going through the material or packet for that week. It is important to remember that we are also here to help them smoothly transition into college life and help them out of the mid-semester slump.

Sessions may start to go a little slower, but it doesn't mean that you can get away with doing less. Your students may not be as well versed in the material like they were at the beginning of the year, but it doesn't mean that you get to be too. At times, you may have long awkward silences following a question, and no one seems to be motivated to do anything. Don't let it get to you! Maintain a positive attitude throughout the session. Your students notice more than you'd think. To them you are a role model; if you are prepared and enthusiastic about chemistry, your students will be too!

Another good way to break the monotony of mid-semester is to change the way you run sessions. Instead of jumping into the material or tip sheet, take some time at the beginning of your session to check in with them to see how they are doing. It only takes a couple minutes, but knowing that there is someone out there who genuinely cares about how you are doing means a lot. Building chemistry within your group is just as important as the chemistry that they do. By building good rapport with your students, peer mentoring and PLTL sessions will run more smoothly, so you can avoid the mid-semester slump all together.

Making peer mentoring and PLTL sessions a place where they want to be will help keep them energized and more inclined to keep up with the material for the week.

During the session, don't forget to bring back the growth mindset. Remind them of how far they have come and how much chemistry they have learned since the beginning of the year. Put the semester into perspective by letting them know that they are halfway there, and then motivate them to finish strong. They all have the potential to succeed; now all that's left is for you to help them prove it to themselves.

Being a peer mentor and leader is definitely a lot of work, but you can do it! Be confident in your abilities! You are amazing!

Got a Lotta People Tryna Drain Me of This Energy

By Erica Hwang

Hi peer leaders and mentors! Congrats on making it to the middle of the semester. By now, you've learned what kind of students your group has and you have experience dealing with the different kinds of students. However, there's one thing that affects us all: the mid-semester slump. You can tell this is happening because no one is going to class anymore, everyone has four lecture videos to catch up on, and does anyone here even know what a radial node is? Trying to keep up enthusiasm in your group can be tiring and at times disheartening, but there are many ways to guide them to the end of the semester.

The first thing to address is the fact that you're also probably experiencing the mid-semester slump, in your classes and in your group. However, if the students can feel that you're tired, they automatically mirror your attitude. Push them to think about the problems by asking lots of probing questions. Keep showing that you care by bringing snacks or having mini games to play during the session for breaks. As always, chatting with your students and encouraging them to joke around with each other will make for a fun, but still productive environment. I personally felt myself tempted to rush through the problem set, but it's so important for them to go through each question and truly understand the concepts behind them. One way to keep them on track is to really stick to the collaborative learning strategies and to really follow the PLTL guidelines.

The kids themselves probably feel a little burned out by now, and they might be feeling bogged down with other classes. It helps to share your own experience with them and tell them that you understand that it feels like a lot is going on, but really emphasize how important staying on top of the material is for Gen Chem. Share any tips you have for time management and encourage them to go to class. Just being in class to take notes will save them a bunch of time later by helping them avoid the lecture-video catch-up before their next exam. At this point, if very few of the students have been attending class, it wouldn't hurt to spend more time on the first question and you can even lecture a little more than usual to get them going on the problem set.

I definitely feel the mid-semester slump as a peer leader, and probably so are you. The mid-semester slump affects us all, but just hold on, we're going home.

Fighting the Midsemester Slump

By Kelsie Kodama

Leading a PLTL group is not an easy feat, especially once the mid-semester slump hits; you're swamped with work, your students are exhausted, and your group's progress in PLTL has come to a standstill. Mid-semester is one of the toughest points in the semester for everyone, so make sure to show your students a little extra encouragement and to help yourself by becoming a more efficient peer leader.

As we all know, once midterms start, they don't stop until finals arrive; this can put a heavy toll on your students, especially first semester freshmen. Channel your inner Drake and remind your students that you understand their struggles and are there to support them. While we are expected to be role models for our students, nobody is perfect; your students could greatly benefit from your own personal experiences with dealing with the mid-semester slump. Not only can they learn from your mistakes, but they'll know that they aren't alone in their struggles. Another way I tried to help my students was by adding a five minute break during sessions in which the students were discouraged; taking a break gave them a chance to take a step back from the problem set to relax their brains before jumping back into working.

During the mid-semester slump, it may be tempting to slack on your PLTL preparations, but don't do it! It's important to remember that however tough school life may become, you have what it takes to be an awesome peer leader. To help yourself out, try to be more efficient with your PLTL preparations. It's helpful to take fifteen minutes or so before PAM to review your old Gen Chem notes for the topics that will be covered that week so that you can get through the packet more easily. Furthermore, use PAM to collaborate with the other peer leaders on ideas for probing questions. Although it may seem like a lot, try to think of two probing questions for each problem in the packet, one to help students if they get stuck and one to make sure they really understand the material. In the ten minutes before your PLTL session, review your notes again so that you remember any miscellaneous information that might help you to better lead your session. During the actual session, keep your full focus on what's going on around you. Think of your session as a mental break from all of your other studies; worrying about your other problems during PLTL won't help you or your students in the long run.

Despite the doom and gloom that we associate with the mid-semester slump, you will certainly weather the storm and emerge a better peer leader because of it. By believing in yourself and supporting your students along the way, you'll definitely end up being the best PLTL leader they've ever had.

When the going gets tough, you leaders keep helping!**By Katherine Pjevac**

We all know the feeling; you are only mid-way through the semester, the desire to just snuggle up in a blanket like a burrito is overwhelming, there is endless work ahead of you, and all you need is a break and Thanksgiving is weeks away – it is the curse known as the mid-semester slump. But don't you fret, we have all figured out a way through it, all you need to do is just take it one session at a time.

This time of the year can be hard for peer leaders and mentors because despite all the stress and slumpedness, your students still need you to be there and help them through it. My first piece of advice to you all is to stay on top of the material. I know it can be hard when you have two papers and a test that are due the following week but staying on top of the material will show your students that you still care about helping them and that coming to the session is not a waste of their time. It is a win-win because it improves attendance AND morales! I suggest using the time during PAM to really understand the concepts being reviewed each week. As my PAM group worked through the problem set, I would think of probing questions, review the interrogative assignment and assign my students to small groups and pairs so that I was prepared if I didn't have extra time before my session to review.

Although this will keep you on top of your Chemistry knowledge, another hat you wear as a peer leader or mentor is helping your students get through the slump as well. Just remember, this is the first semester for most of your students so they could be experiencing the exact same feelings. To keep the spirits high, consider having one person bring snacks each week because then there is always something exciting about the session. I would also suggest getting to each session early so that you can chat with your students about their lives before you start the packet. They will likely ask you for advice about upcoming exams and various Wash U problems which is a moment for you to shine and pass on all of your tips and tricks. If none of this advice resonates with you, then just go and have fun at your session. If you aren't enjoying it, then neither are your students and changing things up or throwing in a few Chemistry jokes during your session can't hurt.

Finally, each week I recommend sending out an email with a reminder for your session and what topics you will be covering. This did two things for my group. It held them accountable for coming to PLTL that weekend because they knew I expected them to be there. If they weren't coming, I usually received an email as to why they wouldn't be there which helped me change around groups ahead of time and know who to expect each week. It also helped my group come prepared to each session so moving through the

Started from the Ground State Now We Here

If you're watching lecture videos now, it's too late

packet was usually a breeze because they all could explain concepts to each other. A simple email can have a big impact on the group. If your group is slacking on attendance or preparation, it can't hurt to try an email.

I know you all can do it and try to look on the positive side – the glass is half full instead of empty, am I right? Good luck with the rest of your sessions and remember to have some fun!

100 to 0 Real Quick: The Mid-Semester Slump**By Courtney Vishy**

You've had a few sessions at this point and you've probably gotten into the swing of things. You may be noticing your students are coming less and less prepared each week. At first they might just not have a good grasp of the concepts, but later they might not have attended a single lecture covering that week's material. This often correlates with other exams, so if you know there is another large class with an upcoming exam it might be a good idea to remind them to attend lecture and review their notes before coming to PLTL. You might be in the same place yourself, falling behind in classes and not preparing as well as in the first few weeks. The mid-semester slump is inevitable, but luckily there are ways to work around it.

First, for yourself, utilize the time spent in PAM. Work with other leaders to come up with good probing questions to guide the students through the problems in the packet. More importantly, come up with probing questions to address the concepts in broader context. This is where the interrogative assignments can be really beneficial. If your students are struggling with concepts, spend more time working out the confusion before jumping straight into the problems. If they get stuck on a particular problem, because they do not have a firm understanding of the concepts, take a step back and ask questions about the concepts to get them back on track.

With your students it can be difficult to move at an appropriate pace for everyone especially later in the semester. They will be at different levels with regard to how much time they have spent learning the material if they have tried at all. Do your best to find a pace comfortable to everyone. You don't want to leave students behind by moving too quickly and you don't want to move so slow that your quicker students become bored. One way to approach this is to have your students that are more prepared explain things to the students who may not be as ready to tackle the questions. This is another great way to put yourself out of having questions directed at you. Students will quickly learn who knows which concepts and will begin addressing the questions to them. This means less worry on your part about having to come up with enough probing questions to cover the entire concept. Try to remember who knows what so that when the same concepts come up later you can refer back to the student who explained it earlier and have them explain it again. This is a really great way to involve all students even though there may be a knowledge gap. The prepared students are kept busy and learning through explaining and the underprepared students are being walked through the concept so they can have a better understanding.

Lastly, it is so important to keep your students motivated throughout the semester. One way is to stay enthusiastic and make the material seem exciting. If you seem like you are interested, they will automatically be more likely to pay more attention. Don't be afraid to send reminder or motivational emails (sometimes cute animal pictures help). Make it worthwhile for students to come. Don't just rush through the packet. Give them advice about how to approach the problems or material in general. If they feel like they are getting more than just extra problems from the sessions they will be more likely to continue coming.