

HR

and the PLTL DE MENTOR



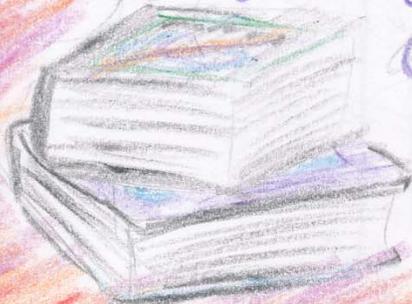
$$N = V \times at$$
$$e^{in} = -1$$

$$q = mc \Delta T$$
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$$B = \frac{\mu_0 I}{2r}$$
$$K = \frac{1}{2} m v^2$$

$$\Sigma F = m a$$
$$u = m g h$$
$$E_{cell} = E_{cell} - \frac{RT}{nF} \ln Q$$
$$PV = nRT$$
$$E = R \ln \frac{a}{a^\ominus}$$
$$\Phi_m = \vec{B} \cdot \vec{A} = BA \cos \theta$$

$$e = mc^2$$
$$v = IR$$
$$\Delta G = \Delta H - T \Delta S$$
$$x = x_0 + v_0 t + \frac{1}{2} a t^2$$
$$\Delta E = h \nu$$

$$pK_a = -\log K_a$$
$$p = \mu$$
$$c = \frac{Q}{V}$$
$$L = \int_a^b \frac{1}{\sqrt{a^2 - x^2}} dx = \arcsin \frac{x}{a} + C$$



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Introduction

A Harry Potter theme . . . what a great idea and clever title: *HP and the PLTL deMentor*. I loved the play on words. Imagine my surprise and horror when, while preparing to write this introduction, I re-read *Harry Potter and the Prisoner of Azkaban* and found Remus Lupin describing the dementors to Harry in this way: “every good feeling, every happy memory will be sucked out of you.” Yipes!

However, then I realized that many students begin their large, lower-level courses with fear and trepidation – emotions that can paralyze a student in his or her learning and course performance, much like a dementor can paralyze a person who focuses on the dementor.

PLTL and the peer leader can be as effective as Patronus Charms in helping students overcome their fears about these lower-level science and math courses. To push the metaphor further, peer leaders help students by assisting them in conjuring their own Patronus Charms--by learning how to study and solve problems in a way that helps the students make the challenging transition from high-school to university-level science and mathematics. But just as is true for any wizard who tries to conjure a Patronus Charm, peer leaders must study and practice if they are to become effective facilitators and leaders. They also must work as a community of peer leaders in close contact with the instructors involved in the courses. In conjunction with the instruction in your SAM and PAM courses, this book is the first step in your journey to becoming an effective peer leader. It is filled with a wealth of ideas from last year’s peer leaders in SAM.

The first PLTL session is much like “**Finding Platform 9¾**.” Other peer leaders can tell you all about it, we will discuss it in SAM, and you will prepare for it. But in the end, the first step will be yours to take. As all of the leaders have written in this section, everyone is very nervous about the first session. Or as Kevin Levin puts it, “As you prepare for your first session, you may soon find yourself pacing back and forth between platforms 9 and 10, getting more nervous about making it on the train as the departure time quickly approaches.” Last year’s leaders stress the importance of preparation, setting ground rules, discussing the PLTL philosophy, and getting your supplies ready. Mike Hsu and Jenny Huo have each developed

wonderful lists of necessary supplies and ideas for that first session. However, as all of the leaders in this first section emphasize, if you smile and have fun, your students will, too.

Do you have to be perfect? Do you have to know all of the answers? Although it can feel that way sometimes, according to past peer leaders (and the instructors with whom you work), **“You Don’t Have to be Perfect.”** In fact, as described in this second section, it is best to not try to be the perfect peer leader; perfect people are intimidating and can hinder discussion. You should always come prepared; however, as David Hirsh says, “PLTL isn’t about your knowledge of Physics, or your ability to recall how to do that Chemistry problem. It’s about getting the group to learn *together*, for *themselves*. When you are totally focused on being the “Perfect PLTL Leader” you lose focus on your group.” The peer leaders in this section focus on the process and the facilitation, in keeping with the PLTL philosophy. As Elizabeth Qin writes, “The PLTL philosophy is built around the idea of not being perfect. There are no ‘correct’ answers, and we, as peer leaders, are not supposed to give students a direct answer to any of their questions.” In addition, as these past leaders point out, unexpected things happen – some of them within your control and others outside of your control. It can be difficult when something does not go the way you planned it, or the way the PAM instructor envisioned the problem set would go. Hence, Jackie Fox gives very wise advice in her statement, “Don’t fret; each new session is a chance to start over.” But Matt Blum also gives excellent advice about what to do after a session that does not go very well: “Coming off of a tough session, it is always a good idea to start analyzing yourself by looking back at where you succeeded and where you might need some work.” This suggestion will also be great advice to give the people in your PLTL group.

How do you make such a diverse group of students function well as a group? The students in PLTL have different backgrounds, academic preparation, and learning styles. Sagar Chokshi points out, “The key to being an effective peer-leader is to use an assortment of teaching strategies to complement a wide array of learning styles.” In **“Bertie Botts’ Every Flavor Bean,”** the past leaders have done a wonderful job of describing the different learning styles as well as giving practical tips to facilitating in ways that address all learning styles. In addition, they describe how to make the collaborative-learning strategies used in PLTL more accommodating to multiple learning styles. Two leaders also add warnings about the use of learning styles: 1) Greg Ewing reminds us all that “nobody learns ‘better’ than anyone else. Try

not to favor those students with a learning style similar to your own. People learn differently, and therefore, you must do your best to engage everyone's brain." 2) Emily Moseley warns, "You must take care in categorizing your members so exclusively, as learning styles are much more complex than, say, jellybean flavors." Even with these caveats, past peer leaders find it very useful to think about learning styles when facilitating their groups. As Michele Markovitz says, "The PLTL philosophy accommodates all learners."

You keep hearing that as a peer leader you should facilitate, not lecture and that you should ask questions, not give answers, or even acknowledge whether an answer is correct or not. How does one accomplish all of this? Why should we not give answers? What type of questions should one ask? Find out in the fourth section, "**Acting DUMBledore.**" Sarah Deitz begins this discussion well by noting, "Questions, if used correctly, form the backbone of the PLTL experience, prompting students to delve deeper into the subject matter and [to] consider angles that had never before occurred to them." However, the pendulum can swing too far, as Jake Friedlein recalls: "Soon I realized that I had been asking too many questions and guiding the group too much. Though I hadn't been giving them answers, the students in my PLTL group began to rely on my nudges toward the answer." Emily Feder gives excellent advice on deflection, "If the group does not know how to start, tell them to 'Take a look at your notes,' or ask, 'Has your professor done a similar problem in class?'" Anna Moseley gives step-by-step tips to help your students when they are "stuck." Max Miller reminds us that group building takes time, "What you should realize about your PLTL group is that getting your students to speak is about as easy as casting a perfect Patronus on the first try."

The fifth section covers that time of the semester when we all want to be somewhere else besides meeting with your PLTL group. In "**Accio Students!**", past peer leaders teach us tricks to keep ourselves and our students involved and interested in PLTL. Charlie Barrows aptly sums up the main ideas when he writes, "draw your PLTL students to your sessions by employing the art of the three F potions: Fun, Fear, and Food." In other words, keep yourself and your students interested by making PLTL fun and by forming a community. Food always helps. Margaret Bonfardin brings out a difficult point when she says, "be honest with the students about the temptation to stop attending. . . . It's better to do this before attendance becomes a problem instead of after, but it's never too late." Lauren Van Dyke echoes this sentiment in her essay: "If

you show up at PLTL one week, and only two of the eight students in your group are in attendance, do not let this pass by without acknowledging the drop in student attendance.” All of the peer leaders stress that as the leader goes, so goes the students. Or, as Yaun Manfredi, puts it more vividly, “Well, for starters you've got an Orgo exam next week, along with the problem set due Thursday, and not to mention the lab report you haven't done yet. You're getting the hang of this PLTL thing, so maybe it won't be a problem to not prepare for PLTL this week, or maybe rush your group through the problems, so that you can have some extra study time. . . . If this temptation hasn't already presented itself to you, it probably will soon.” The leaders in this section give excellent tips for not allowing this temptation to overtake your PLTL sessions.

The final section, “**Defense Against the Dark Arts,**” describes problems that arise in PLTL despite your best efforts and how you can address these problems. For example, Megan Fieser notes, “Having a team requires constant attention. Players are constantly changing and as the leader, you need to adapt to those changes as they occur.” Do not become complacent. Doing so will be “death” to forming a productive PLTL group. Other leaders note additional problems that can occur: “Giving your group answers is a slippery slope. Once you start doing it, they'll keep looking to you for the answers and you will find yourself giving in to them. Fixing this is simple. Go cold turkey.” (Michael Ingber); “Trust that they will make it there without your explicit input.” (Alex Drake); “most of the problems during PLTL sessions did not arise from conflicts between the students, but were because the group did not work through the problems using the problem-solving strategy correctly” (Alison Li); and “it is up to [the students] as a group to decide how well they use the time in PLTL to understand different methods of problem solving” (Sammita Satyanarayan). All of the leaders in this section agree that PLTL is all about being a team; or, as Suchita Rastogi tells us, “The bottom line is that the team you cultivate is just as important as the knowledge you help students learn.”

Peer leading is exciting, difficult, scary, and fun. Just as the students in your PLTL become a community of scholars, you are joining a community of SAM and PAM instructors and peer leaders (both new and experienced). All of the members of this community learn from one another as we work toward common goals. As Corwin Rhyon summarizes, “it is important to note that if serious problems result or if any situation you feel afraid or uncomfortable in approaching your group, you should use the many resources around you. First, other leaders may

be able to help by offering suggestions or advice based on their experiences. Also, use the PAM and SAM classes as chances to ask questions or share experiences with other leaders. Finally, use the professors of SAM and PAM as necessary through email or during classes. As a leader, you should not hesitate to ask others to help make your sessions more successful and less stressful.”

I look forward to working with you this semester in reaching our goals.

Regina Frey

Pointers for the Perfect Beginning by Mike Hsu

I believe the most important session is the first one – this session is what sets the tone of what your PLTL classroom will feel like in the next few months. But don't worry – here are some tips:

Establish firm ground rules. Although this part isn't the most glorious part of being a PLTL leader, it must be done. Make sure everyone knows what is expected of them: community expectations, PLTL philosophy, punctuality, respect, preparedness, and whatever else you can think of. You need a solid foundation so that your group does not descend into a chaotic mess. Order is essential, at least in the beginning. As your group members get more comfortable with each other, you can become more lax with the rules as you see fit.

Be confident. You were selected to be a PLTL leader – you are qualified to be there. You went through this course already and did pretty well. Now make sure you own it. Nobody wants to go to a PLTL session where the leader does not know what he/she is doing. Even though you may get flustered in your first session, don't show it. You already went through the problem set in PAM, so you should be confident in your knowledge of the material. And besides, if the group understands the material well enough, you do not really have to know anything. Your role is to facilitate the discussion so that everyone feels confident with the material.

Go slow. There is no need to speed through the problem set. In this first session, it is more important to demonstrate how every method should be used correctly, and for them to realize that you will not be providing answers to the group. If anything, the material in the first problem set should not be too difficult. Therefore, you should focus on explaining how scribe or how round robin works, rather than trying to finish up the session early.

Smile. If you don't remember anything else, remember this. You are the *peer* leader, not the professor. You want each and every one of your students to succeed in the course, and you want them to have fun in the process. By creating a positive environment in the PLTL classroom, your students will enjoy coming to PLTL. Unfortunately, the burden of creating this happy environment usually falls on you, so you do have to work on this. Icebreakers and food does help, but I believe smiling is the most effective. If your students see you smiling, they will probably smile back.

Good luck! You cannot control who you have in your group, but you can control the first session. Do not get too anxious over this session – you have all the tools necessary to succeed. I hope you and your group get off to a great start!

Remember Harry Back in the Sorcerer's Stone?
by Jenny Huo

Harry had no idea what to expect on his first day of Hogwarts, let alone how to even get there (via the handy Hogwarts Express located in Platform 9¾)! I'm sure you, as a brand new PLTL leader, have a general idea of what to expect, because you all probably used to be ex-PLTL students. However, approaching PLTL from the leader perspective is definitely something unique to get used to.

One of the most helpful tips I received was about what to bring to every session. I've compiled a "school shopping list" (not for Hogwarts, of course) that you may find useful:

1. **BRING YOUR WORKSHEETS!!!!** I cannot stress how important it is to bring the worksheets! I forgot them once back in my common room and had to go running back...not the most fun thing to do on a Sunday morning!
2. **FOOD** is often a great, great, GREAT thing to bring to your session! I brought something for every session and it definitely perked up all my group members. It also gives them something to talk about on the first day, and it lightens up the conversation A LOT! ☺ I tended to try and balance the sweet and savory—like chips and cookies! Quite a hit. If meal points/money is an issue, you could always suggest someone different bring a food item every week!
3. **MARKERS** are usually provided for in the rooms you will be assigned, BUT there were a couple times the markers either didn't work or just simply disappeared from the room. So, I suggest bringing a couple spare markers just in case! I had to go through a whole session once with a bad marker that people could barely read. Let's just say, that was a rough session.
4. **OLD NOTES** were helpful for me to bring along because they always cleared up little issues for my students, especially when I wasn't 100% sure of a certain concept or two.

In addition to all of the above necessities for a successful PLTL session, you also need to make sure to set **GROUND RULES** right from the start. It's hard to lead a session without rules and it'll eventually become extremely ineffective for the whole group. Setting rules will also help put the group on the same level right from the start; no one will feel different from one another or intimidated!

Another important tip is to **PREPARE** for every one of your upcoming sessions. I cannot emphasize enough how nervous I would have been if I didn't look at the worksheet or

notes beforehand. It's super important to be up to date with your students' material because even if you did take the class the semester before you lead your sessions, anything can change!

All in all, PLTL is a wonderful experience and I'm so excited to be in the PLTL "world" now! It definitely is a little nerve-racking at first but completely worth it in the end. So, in conclusion, just breathe, buy some snacks, bring your brain, and relax, because it'll all be ok, and probably even great!

All Aboard
by Melanie Huttner

Before Harry and the other first years could make the running leap through the station wall to platform 9 $\frac{3}{4}$, much preparation was needed. Harry and his friends first swung by Gringott's Wizarding Bank to pick up some cash, before stopping by Madam Malkin's clothing shop, the Telescope and Cauldron Shops, and, of course, Ollivander's to find the proper wands.

Just as wizards must be prepared prior to arriving at Hogwarts, peer leaders must also be prepared for their first sessions. Imagine if Harry arrived at potion's class with no cauldron. He would be chewed out by Professor Snape and laughed at by his peers. Thus, peer leaders should make a list of the basic essentials that might include: problem sets, periodic tables, a calculator, and chalk/whiteboard markers. By having the physical materials prepared, you can focus more on the mental and social aspect of how to approach your first session.

Remembering your supplies is the easy part. But facing seven or more students? That nearly made me break-out in hives. Even those who put forth enormous preparation will still experience some nerves before that first session. Harry, Hermione, and Ron never know what to expect each year when they enter platform 9 $\frac{3}{4}$, and peer leaders will have no idea what the group's dynamics will be like. Despite the nerves you might face, it is up to YOU to decide how to run the first session and what tone you want to set. First impressions are often long lasting. As a result, a leader who arrives prepared, is friendly and upbeat with their students, has a better chance at bringing harmony to the group than one who does not take his or her role seriously.

I would imagine that every leader has a routine that works for them. Mine began every Thursday night, when I looked over the appropriate PLTL set from the year before (I kept all of my PLTL problem sets). On Friday I would participate in PAM, and Sunday morning, before my session, I reviewed my notes from the previous year that corresponded to the correct subject. When I first started in SAM I was shocked to read that most prior leaders recommended bringing food. Neither of my leaders had brought food, so I did not realize that it is a common occurrence. I was also not thrilled about having to buy something for my group members each week. However, before the first session I decided that I would bring food occasionally on special weeks such as the first session and right before their first test, but otherwise we would rotate so every student would bring something once during the semester. I brought this idea up at the first session and, once it was approved by my students, my method ran smoothly.

What is the good news about all of this preparation? Each session gets a little easier. While I always experienced a bit of nerves when walking over to my PLTL room, the more time I spent with my group, the more we bonded and the less concerned I became with being the “perfect” leader. Therefore, while the first session will bring out the most nerves, remember that it is an important stepping stone to the rest of the semester. With the proper preparation and success, your semester will be off to a smashing success, with no Slytherins to antagonize you, or any Dark Lords to defeat your progress.

PLTL: History of Magic or Quidditch? The Choice is Yours!
by Michal Hyrc

Congratulations on becoming a PLTL leader! As Harry was when he was admitted to Hogwarts, you're probably quite excited but also a little nervous about what you're about to experience. One of the hardest things to approach as a new leader is the first session- after leading this, you know what to expect and being a PLTL leader becomes much easier. Hopefully my advice about the first session is useful to you.

The first PLTL session is by far the most important. It's also the hardest to lead, because you have absolutely no idea what to expect. You've never been a PLTL leader and perhaps you've never been in a PLTL group. Yet, as you've probably figured out for yourself, and already heard in SAM, setting the right tone in the first session is critical to having a good group for the rest of the session. A good first session can make the difference between a fun, upbeat PLTL with regular attendance, and an awkward, silent PLTL with only a few students showing up.

The choices you make about your session are key to having a good first session. Just like Harry and Draco made different choices about how they would spend their time at Hogwarts, you too will also have a multitude of choices to make for your first session. For example, "Will you take time out of your busy schedule to visit your PLTL room before your first session?" "Will you buy chalk or white board markers for your room?" "Will you be early for your first session or the last one to show up?" "Will you bring snacks?" "Will you take time to talk and connect to your students, or will you only interact with them as a leader?"

The answer to all these questions is entirely up to you. After being a leader, I think that the answer to each of these questions should be a resounding yes; however, no one will fire you and you will still get paid if you don't do these things.

Apart from preparing for your first session you might ask yourself, "what can you do inside the first session to make it a good one?" The most important thing is to connect to your students. In the first session, the social aspect of PLTL is more important than the intellectual aspect, and it's much better to walk out of the first session not having finished all the problems but knowing the names of everyone in your group and something about them. Do an icebreaker or two at the beginning of your session, and before and after the session talk about non PLTL-related matters. Consider taking a break during problem solving to just talk about the class you are a leader for, or something else entirely. Chances are many of your students will be freshmen,

and your first PLTL will be one of the first things they do at Wash U. It's particularly important to make these students feel comfortable and welcome.

After you have a good first session, everything is downhill from there. After establishing a friendly and open atmosphere, your group will voluntarily contribute to problem solving instead of having to be prompted by you. They will want to attend your PLTL because they feel it's helpful in mastering material, instead of skipping because they find it a waste of time. At the end of your PLTL they might even ask you to be there leader again next semester. Just remember, that most of all, be prepared and friendly in the first session.

Catching the Hogwarts Express **by Kevin Levin**

As you prepare for your first session, you may soon find yourself pacing back and forth between platforms 9 and 10, getting more nervous about making it on the train as the departure time quickly approaches. Time is ticking down and you have no idea where to turn, questioning your qualifications for learning magic in the first place. Your thoughts are distracted by fears, questioning whether or not you are prepared, if you will succeed, and if you can defeat the dark arts. If you feel like this scenario describes your attitude about leading PLTL for the first time, relax!!! Embrace your excitement and set aside your worries. If you are still feeling hesitant, read ahead to learn some tips to increase your chances of leaving your first session a confident leader:

First off and perhaps most importantly, start your session with an icebreaker or another activity to get your students acquainted. A simple option is to have each student state their name, the one club they are most looking forward to joining, and their favorite ice cream flavor. Next, have a little game to see who can name everyone in the group and give the winner some food (maybe a cookie). In fact, continue going around the group until each student can name all members of the group (and give everyone a cookie for succeeding). In this way, everyone will know each other's name and the atmosphere should be much friendlier and inviting for participation. Of course, make sure that you learn everyone's name, and when you call on someone to volunteer or put people into groups, be sure to use their names. This will reinforce their feelings of inclusion and serve as a reminder to the group of everyone's name.

Cookies? Wait, where did the cookies come from? Unless you know a spell to make them appear, you brought them. They serve as a great way to lighten the nervous tension in the room that the freshman will undoubtedly have as they come to yet another unfamiliar setting. I found that food seems to help spark communication during all weeks though, not just the first one. Consider making a rotating schedule if each student agrees to bring food one week, so that food can always be magically present.

Before you begin working on the problem set, work with your group to create a list of rules to follow, such as: respecting the other members; coming to each session prepared; and maintaining a positive and constructive attitude. This is a good time to review the PLTL

philosophy to reinforce the relevance of the rules you just made. It may also be a good idea to repeat this list next week to remind your students.

You are now ready to tackle the worksheet! Make sure that you review your notes before PAM so that you can ask necessary questions to reaffirm your knowledge. Reviewing your notes once again after PAM will prepare you to ask leading questions when the group gets stuck or extra conceptual questions if they breeze through the problems. Ahhh! What if even after this preparation, a student asks a question that leaves you startled and you don't know where to begin? Do what you should always do when a student directs a question to you, and redirect the query back the group. This makes you seem like you know what you're doing, while maintaining the ever-important PLTL philosophy. Wondering how to define your role if you don't respond to questions directly? You will certainly figure this out through experience, but I find that I can be most helpful by reminding my students of the "little things" that are sometimes easy to miss. These include always using units and showing all steps in order to simulate an exam setting. In addition, encouraging communication and explanations of conceptual reasoning is a large role.

Finally, remember back to why you signed up to be a PLTL leader. Your first leader probably served as a role model to you during your first days on campus, in part because of their confidence. So, be confident in your abilities, and enjoy your first session!

Handling the First Years by Lindsey Moses

If you've been in PLTL before, you already know the drill. Or do you? Being involved in PLTL as a leader is a completely different experience from participating in one as a student. If you came in last year thinking your leader was the source of all knowledge, think about yourself now and ask, "Is that really the case?" Are you an expert in your subject? Or are you nervous that you won't be able to answer any of the questions they ask you. The most important advice I can offer is to be confident during your first session. If your students think that you are incompetent from the start you will never gain their respect or trust, and it is impossible to run a successful PLTL without those two things. Most of the students in your group probably have no idea what PLTL is or how it works, so it is completely up to you to explain the philosophy of PLTL and establish a set of rules for your group. If these things are done on the first day, your students will most likely follow the pattern of the first session and a successful group will ensue.

PLTL should be fun, so don't feel like you have to act as an authority figure and be in control all of the time. On the first day the students will look to you as a leader and most likely treat you more like a teacher than a peer. It is important to remember that you are a *Peer Leader*, so try to lighten the mood a bit. Also, make the first session enjoyable so that the students get a good feeling about PLTL and are excited to come back. Bring some cookies or candy, have everyone talk about where they are from, or have students talk about the classes they are taking this semester. Chances are they will have things in common with one another, or maybe even with you. Finding these links always makes people feel more comfortable, and therefore, more likely to speak up during the first problem set when a lot of awkward silences can be expected. It will also give you a topic of conversation for the next session.

I found that it was very difficult to find the balance between being a peer and a leader, especially towards the beginning of the semester. You are not much older than most of the students in your group, and maybe even in some of the same classes as them. It is important, however, to make clear the philosophy of PLTL and the fact that you are not there to participate in the problem solving, but to facilitate their problem solving as a group. Making a list of group rules from the beginning will help clarify any questions in the students' minds about PLTL and what will be expected of them.

One more thing to keep in mind is that your group is almost certain to change throughout the semester. Some students decide that PLTL isn't for them, some don't think they'll be able to make the time commitment, and others may end up dropping the class altogether at some point during the semester. So although the first session can be a bit intimidating, remember that over time the core of your group will form and after a few weeks you will have a much better idea of the different types of people and learning styles you will be working with. For now, your main job is to let the students know what PLTL is all about, and get them excited enough to keep coming back.

Ready, Set, Run: Charging Through the 1st Session Barrier **by Akhila Narla**

Mustering up the courage to plow straight into the unknown for your first PLTL session may seem intimidating. However, by keeping a few pointers in mind, you can find that the transition from Platform 9.75 to being aboard the PLTL Express will be a breeze. You will find that subsequent sessions can run quite smoothly by properly preparing for the first plunge and by maintaining confidence in yourself as you move along.. First session fundamentals include: cleverly packing your suitcase (what to do before your first session), getting aboard the train (starting out your session), and acquainting yourself with those on board (initially fostering the group dynamic).

As you prepare, remember that aside from the basics required for the first session, it is a great idea to bring healthy snacks (like some fruit and nuts) for your group on the first day. Students will appreciate that you are making an extra effort to bring something that is good for them, and this can often spark lively discussion among group members. You can also establish during the first session how often you plan on bringing food and you might suggest that the students can sign up for a specific week where they will provide the food if you are short on meal points. You can also prepare for sessions by making sure you have appropriate leading questions that go along with the PLTL problems. Since the students are getting a feel for how useful the PLTL sessions will be for them, they will like knowing that you come prepared to probe their knowledge and make sure they know all of the nuances of the concepts they will be covering.

At the actual session, or once aboard the PLTL express, make sure to talk to the students who arrive early as you wait to enter the room or get started. You can ask them about how their week has been going, what classes they are taking, or what they think about the class and Wash U so far, etc. This helps them feel more comfortable with the group. I recommend that you start memorizing their names right away and ensure everyone knows each other's name by either doing a name game or having nametags. This will help the students feel more comfortable asking each other questions. Additionally, at the first session you will want to firmly emphasize that the participants will get the most out of PLTL if they come to each session and have worked the homework problems. Encourage students to speak up whenever they don't understand or cannot explain ideas. Being quiet and accepting another students' answers without

understanding it, or not attempting to explain ideas, will not help students learn the material of gain necessary confidence in what they think is true.

As the first session winds along, it is crucial to foster a group dynamic that sets a precedent of an enjoyable and educational session. Be enthusiastic about the different PLTL methods, give encouragement to quieter students, laugh along with the extroverted ones, and encourage interactions among group members. If the students become friends they will have more motivation to come to sessions prepared to question, communicate, and collaborate. The first session sets the tone for future sessions, and if students leave feeling like PLTL is fun and helpful, they will keep coming! Ultimately, a prepared and excited leader results in a successful session!

For PLTL First Years
by Jacob Shaw

Dear New PLTL Leader,

You have been accepted as a student mentor at Washington University in St. Louis. Congratulations! Unfortunately, this is where the Harry Potter references end. If you are nervous for your first PLTL session, you are definitely not alone. Preparing for the first session and planning how things will go will help alleviate some of your stress. Here are some tips that you may have already gotten and will definitely get several more times throughout the semester, so soak them up and take them to heart.

One of the most important things to remember is that even if you're nervous about meeting your group, your group will most likely be just as nervous. Take comfort in the fact that, if they are inexperienced freshman, they will consider you a genius... at least for awhile. Have confidence in front of your group but remember to be friendly. It's good to let your group do a lot of talking from the get-go.

You may want to try breaking the ice with an icebreaker. It tends to get the job done. Last year I had my students split up into Pictionary teams and we played a few rounds of chemistry Pictionary. Games are good icebreakers because the students (especially the freshman) will have already participated in about twelve icebreakers since they arrived at college and the last thing they want to do is rattle off a list of their favorite movies and TV shows again. If you're not a big fan of games, you should at least have your students talk with each other about who they are and where they come from, etc.

Another thing to add to that list you've started, or are about to start, is snacks. The power of snacks can NOT be underestimated. If you like experiments, try bringing snacks one week and not the next. I tried it and I will never do it again. Snacks make the fact that the students are stuck inside on a glorious weekend a little more manageable. Candy is always a good option, but for the first day you may want to whip out the brownie mix or something special to give a good first impression.

However, don't forget to lay down the rules for your group. After you have gone over the PLTL philosophy, you may consider allowing the students to volunteer the rules themselves. It's much more likely that they will remember the rules and they may even follow them if they

come up with them on their own. Some key points to touch on: what time the session starts, respect between group members, do your homework before PLTL...

Before your first session it would be a good idea to email your students and introduce yourself briefly. Give them a list of what to bring to the first session: calculator, notes, pencils, erasers, and smiles. Remind them of where to meet and what time. It's important to act excited with your group so that you seem approachable. The way YOU behave establishes the mood of the group. If you are excited about PLTL, they will be. If you're tired and you don't really want to be there, they will notice. Encourage conversation! Ask the students how classes have been going or anything else that comes to mind.

Lastly, make sure you understand the problems before your first session. You want to be fully aware of mistakes that your group may make. If you've done all these things and you're still really nervous or anxious, sit down in a chair and take some deep breaths because you're over-reacting. You were selected for this position, so relax, you will be fine. I Pinky promise.

Everybody Has Their Bad Days
by Matt Blum

As PLTL leaders you will have some really good days and some completely awful days. After some sessions you will go home thinking that your group is perfect and you were born to be a group leader. On other days you will walk away wondering how you ever managed to convince them to give you this job or how you even passed the class that you are leading. The truth is that you will have bad sessions, everyone has them, and there is a ton that you can learn from them.

While it is easier to block these seemingly failed sessions immediately from your mind, you can learn from every session, especially the more difficult ones. There are many components of each session on which you can reflect to find potentially problematic factors that you can improve. Coming off of a tough session, it is always a good idea to start analyzing yourself by looking back at where you succeeded and where you might need some work. Think about your preparation for that session to see if you really knew your stuff or if you could have done a bit more outside of PAM to refresh yourself on the material. Another valuable tool is to evaluate the questions that you asked your group. One of the greatest challenges of a PLTL leader is asking strong questions that invite the group to think, discuss, and approach the material in new ways. So, it can be helpful to identify a few questions from the previous session that sparked strong discussion and adapt those types of questions for the next session.

It is always a good idea to think about how you facilitated the session. Keep in mind how you started the session, how you introduced the questions and methods, and how you promoted interactions among group members. It is always a challenge to ensure equal collaboration from everyone since it is always easier to rely upon the dominant students to keep everything moving. I have always found that the sessions I feel uneasy about afterwards are the ones in which the participation is completely unbalanced. Lastly, try to take note of who works well together and in what role people perform well. If you make an effort to reflect back on these topics after each session, you will make your most difficult sessions easier and your most successful sessions even better.

Tough sessions happen to everyone, but by reflecting back on each session afterwards, you can keep these rough spots to a minimum. At the same time, some sessions that initially feel like they did not go well might have actually been really successful depending on how you look

at it. For example, suppose you just had a session in which your group only made it through a quarter of the problem set. You might be thinking that you were a complete failure at getting your group to work efficiently, when in fact, your group worked slowly because you asked some amazing questions that got your group to delve into deep discussions into the material and now they actually get it! Every PLTL leader, regardless of age or experience, can learn a lot from each session. As long as you maintain a positive attitude and try to improve each time, each week you will come back to your group as a better PLTL leader.

**Why You Don't Have to be Percy Weasley
by Jackie Fox**

One of my main concerns about being a PLTL leader was that the students would ask me a difficult question early on in the semester that I wouldn't be able to answer resulting in their discovery that I was a fake. I mean, who was I to be leading this group? Maybe you don't have any concerns, you're already perfect, but for the rest of you, here's a little secret, you do NOT have to be perfect to lead PLTL. You do not have to be an expert on every single topic covered in your subject. Obviously it is important to prepare for your sessions and ask questions during PAM if you don't understand something, but your students will not judge you if you don't know the answer to one of their questions. In fact, the main goal of PLTL is to let the group figure out the material on their own, so you shouldn't be jumping to answer their super hard questions anyway. Instead of focusing on being all knowing about the material, you should focus on shaping your group dynamic, because that is something they will notice if there are problems.

So, what happens if you mess up your group dynamics? That may be a little more difficult to recover from, but, luckily, people are very malleable. So maybe you let the dominant member of your group talk too much last session, or you let your group get way off topic and now they want PLTL to be socializing time, or you actually answered one of their questions and now they are looking to you as their own personal Dumbledore. Don't fret; each new session is a chance to start over. If you let your dominant member talk too much, make an effort during the next session to make him/her scribe and try and draw other members into the conversation. If your members are having too much fun, try and, nicely, direct the conversation back to chemistry. If you answered too many questions, just make sure not answer any others and redirect any questions they ask you to the entire group. As long as you actively work on your group dynamic each session, you can recover from any minor mistake.

Now that you've figured out how to handle knowledge of the material and group dynamics without feeling pressure to be perfect, what should you do to stop your group from getting bored? Obviously, boredom would never happen with the perfect PLTL leader, but the whole point of this essay is that you don't have to be perfect. What if your kids get a little burnt out, or lazy, or just plain bored during the sessions? Trust me, if this hasn't already happened at some point to your group, it definitely will. Should you bring in perfect little goody-bags to entice them? Or come up with a theme song for your group to boost morale? If you have time,

then definitely do those things, but if, like me, you can't always be perfect, simply showing your group how much you care about them can work wonders. I know it sounds cheesy, but it really works. For example, make sure to have some small talk at the beginning of your session and ask your kids how they feel about the course. They love to blow off a little steam about Gen Chem before tackling a tricky problem set. Also, bringing in Snickers or some other treat, even if it's not homemade is always appreciated. Remaining enthusiastic about PLTL and showing your kids that you care, will motivate them on those days when they are tired. I would try and start each new problem by asking my kids in an excited voice, "Who wants to read the next one!" It was kind of corny, but they thought it was funny, and I always got a volunteer. If that's not your style though, don't force it. You don't have to be perfect, you just have to bring your individuality to the group, and they will respond to you.

**It's Not Always Your Fault When Things Go Wrong
by Fung Ho Yee Joyce**

Are you disappointed at yourself? Please don't be! I was disappointed at myself at the very beginning of the semester and I was very frustrated. However, as the semester went on, I understood that it was not entirely my fault and I don't have a perfect group. I tried my best and I was glad that at the end of the semester the students benefited from the sessions.

Just like everyone, I pictured the entire process of how my sessions are going to be like in my head. I pictured myself doing what we are taught to do: facilitating the discussion, deflecting those questions directed to us, and asking insightful questions to expand discussions. I prepared for my first session the night before and ran through the session in my brain several times until I was confident with myself. During the first session, I had a considerably large group consisting of seven people. Everything seemed fine and I was fairly happy of what I had done. I thought "that was not too bad! I can actually do this!"

I prepared the same way for my second session. I had a little less anxiety and a little more confidence. Also, I was pumped to improve what I have done wrong last time. However, only four people there showed up to the session. Some students said they had new commitments and could not come to my session anymore. Others just did not show up without telling me. With a smaller group, it was so much harder to establish the group dynamics. I started to wonder whether it was the way I lead the group that led to this result. I talked to fellow leaders and they seemed to always have a fairly large group; however, I started to constantly have small groups. Being a new leader who optimistically mapped up everything perfectly in mind made my small group size and poor attendance rates seem like a failure. Things got worse later in the semester when everyone was starting to get beaten up by school work. For example, some people started to not concentrate during the sessions, personalities started to come out that were negative at times, and the atmosphere of the discussion was pretty awkward.

I started changing the way I lead. I adopted some suggestions that were taught in SAM class: changed around the room, encouraged students to ask and answer their own questions, and hoped that the people would keep coming to PLTL. Luckily some new students were added to the group and things seemed to get better. The new students were very eager to learn and the atmosphere of learning was exponentially improved. I began to think that it was not too bad to have a small group after all. There are just different ways to establish the group dynamics and

the so-called group dynamics for a small group were obviously different from that of a big group. I think with the smaller number of people, they were able to ask each other questions more often and were able to get to know each other better than as a large group. There are obviously great advantages of having a big group but when we are stuck with a small group, we have to make the best out of it and utilize the advantages of a small group.

At the end I realized that it was not entirely my fault that people didn't come. Obviously, I could have done something different and could have help raised the appeal of coming to PLTL on Saturday. I should have probably brought more food or baked goods. However, the decision of whether to come to PLTL does not only depend on the usefulness of the sessions. People have their own priorities for their learning and sometimes they just decided to not come because they are too busy. I shouldn't have beaten up myself and believed that my low attendance rates were because I was a bad leader. I would probably have done better if I was not frustrated and had not lost my confidence. So folks, it is okay if things went wrong, it is not necessarily your fault; you should just do your best and try to fix the situation with confidence.

**You Don't Have to be Prefect: Not Everyone Liked Percy
by Marc Hendel**

Not everyone will be happy with you in PLTL. No matter how hard you try, there might be a student who hates the way you talk. There may be a student who hates your jeans. There may even be a student who loathes your way of holding a pencil. If these students show up consistently, then they have probably gotten over it.

The fact of the matter is, if the students are all comfortable and in love with you, then you probably aren't pushing them hard enough to work as a team. It's hard to bring many personalities together and form a cohesive thinking unit. Sure, there are many techniques to incorporate both the shy student and the over-enthusiastic student, but don't expect these techniques to work perfectly.

It is extremely important to remind the students of the PLTL philosophy. This is the easy-fix and the go-to technique for dominating students. For shy students, I find using the problem solving techniques to your advantage to be the best strategy. If these strategies don't work, however, don't worry!

If you assign a shy student to become the scribe, and he or she refuses, there probably won't be a coup d'état. If you tell a dominating student to not interrupt other students, and then they revert back to their old ways and blurt out the answer; don't worry, the group will just move on. The students aren't rebelling against you; it's just hard for them to get comfortable with working in a group setting.

Students who attend PLTL are already telling you that it is worth it to them. They have asserted that they are willing to sacrifice two hours out of every week to participate. You don't have to worry about them hating the sessions or loathing you, because if they did, they simply would not attend.

Even if your shy students mumble, "you are the worst leader ever" as they walk past you begrudgingly to write on the board for their turn as scribe, they still think PLTL is worth it. Even if your dominating student gives you the evil eye because they know the answer to the problem, that student thinks it's worth it to be there.

This isn't always the case. In my PLTL group, I began with eight students. For whatever reasons they had, three of the students stopped coming after one month. I didn't get depressed

and resign. Instead, I tried to look at things optimistically. I was left with a core group of five students who came every week and worked together brilliantly as a team.

Surprisingly, that core group of five students included the livid shy student and the dominating know-it-all. In fact, despite their rude comments and their evil stares, they ended up being the most team-oriented members in the group.

Don't get me wrong, do everything you can to get students in PLTL. This could mean emailing them with positive words about the problem set on the Friday before your session or it could mean knowing their favorite foods. But, if students stop coming, don't beat yourself up over it. The remaining members of your group are the core. You don't have to worry about them disliking PLTL, because by showing up consistently, they have already demonstrated their affinity for you as a leader and PLTL as whole.

The Big, Scary "Perfect PLTL Leader" by David Hirsh

As hard as it may seem to believe, you won't be the perfect PLTL leader. I know what you're thinking, "but what if I try really hard and I do all the things this book says and yada, yada, yada." Still, you won't be perfect. There will be days where you don't know an answer, or you don't quite follow the PLTL guidelines to the letter, or you will be slightly late or... Things happen. What I'd like to convince you of is that--you don't have to be perfect to be a perfectly great PLTL leader.

Being a PLTL leader does not mean you're the be-all-end-all source of knowledge in your subject. There will be times where you simply don't remember or don't know the answer to a question. At moments like these it is important to remember that "I don't know" is a completely acceptable answer for your group. Nobody expects you to be an encyclopedia of knowledge. And frankly, it would be kind of creepy if you were.

The PLTL structure is designed to help many people with many different learning styles. You are definitely advised to follow the system whenever possible. That being said, the key part here is "whenever possible." What happens if your group suddenly shows up with 2 people in it? Two people are probably not enough for the "½ and ½" strategy. Maybe you'll need to adjust your plan to do a few more Scribe or Round Robin problems. A PLTL session is dynamic and you need to be able to go with the flow. If you are completely caught up in being the "Perfect PLTL Leader," you may actually do more harm than good.

Going into a PLTL session with the attitude of "I **WILL** be the greatest PLTL Leader of all time!!" can cause you to get caught up in the little things and forget the big picture of what your role is in PLTL. You are a *Peer* of the members of your group. You are *Leading* them in their weekly problem set. And most importantly, you all work as a *Team* to help the group *Learn*. PLTL isn't about your knowledge of Physics, or your ability to recall how to do that Chemistry problem, it's about getting the group to learn *together*, for *themselves*. When you are totally focused on being the "Perfect PLTL Leader" you lose focus on your group.

At the end of the day, you will be a better PLTL leader if your goal in each session is to help the group learn, rather than to be the "Perfect PLTL Leader." In many cases, you might actually need to do *less* to help the group *more*. A big part of being a good PLTL leader involves noticing the times where you can step back and let the group go on its own. If you're constantly

focused on “what can I do to help them understand now, what about now...” in every moment of your session, you'll lose chances for the group to teach themselves. So, I say, take a “less is more” approach to your group. Lose the stress of trying to be the big, scary “Perfect PLTL Leader” and you and your group will notice the difference. Best of luck!

Relax and the Devil's Snare Will Let Go
by Stephen Hogsten

So, you are a PLTL leader now. You're probably feeling a fair amount of pressure. Chances are that you probably have not had to do anything like this before. Maybe you have had some tutoring experience or were a camp counselor (or something like that). Unfortunately, those experiences do not really apply that well. This is exactly the same as Harry and all his wizard friends when they went to wizard school: they may have had to learn school skills, but wizard school skills were a completely different beast that they had to learn from the beginning. See what a good comparison Harry Potter is. And just like Harry Potter, you can't expect to be a master wizard right from the beginning. It's acceptable and even expected that there'll be some bumps along the way, but eventually you will make magic. And great magic at that.

Another thing about Harry Potter is that the most important thing was teamwork (I think). In a lot of ways, what was important was not the things that Harry did himself, but the ways he was able to inspire his team. This is the same with you. It does not make all that much difference if you always say exactly the right thing or ask exactly the right questions. The important part of a Peer-Led Team Learning group is the dynamic between the group members themselves, and not the part the leader contributes. The whole point of PLTL is to have them work together well with each other. In Harry Potter, in the first book, what made them succeed were the other members of the team. For example, Harry didn't do that much, Ron was able to direct them through the challenge of the wizard chess, and Hermione had the courage to speak up and show them how to escape from the vine that squeezed them really hard. This is ideal. This is the point you want to be at; you want them to be encountered with a problem and then have someone step up and offer good advice. In PLTL it will be a little different from Harry Potter, obviously, not all advice will be right, some may disagree and start a discussion about the correct course of action, and ideally each problem is solved with input from more than just one person, maybe even everyone. You may be concerned because in these cases Harry (the analogy for the PLTL leader) did not even contribute. This is really okay, it's actually ideal if they can do it all on their own. We are more like the backup plan.

No one expects us to be perfect experts at what we're doing. If you're a calculus PLTL leader no one expects you to be a master who can do any trigonometric substitution instantly in their head or who has memorized all the series forms of simple functions. You should know

what is going on with the material, and how everything works, and so on, but you do not have to expect yourself to be able to work magic and make everything intuitive for everyone, because that is not your job. Your job is to get students to explain it to each other by bringing all their conceptualizations together.

So I guess my focus is to downplay the importance of the peer leader so that you do not get too worried that you'll do some little thing wrong and screw everything up, have all the kids failing their classes, and the world taken over by the evil Lord Voldemort. Unfortunately, although as a PLTL leader the focus is not on your teaching, but the work of the team, you still have responsibilities. You cannot forget that you still need to make sure: students work together as a team, that no one person becomes too dominant, that they still focus and work well on the problem set, that they come prepared for PLTL so that the whole group can focus, that they come to PLTL at all, and that you do not give away all the answers, et cetera et cetera et cetera, but it's okay if you mess up.

Epilogue

By the end of the semester _____, the new PLTL leader, had a successful group who always finished every set early with little to no input from the leader and everyone got an A++ on the final. Also, _____ got a raise for being so great and married the future model who was in their group.

Perfectly Imperfect
by Elizabeth Qin

It's true – you don't have to be a perfect. Harry Potter wasn't but we all still love him anyway. On the other hand, Hermione seemingly was. But you don't have to be just like her. You don't have to always know all of the details about every problem or ask all of the right, deep, conceptual questions. The PLTL philosophy is built around the idea of not being perfect. – There are no “correct” answers, and we, as peer leaders, are not supposed to give students a direct answer to any of their questions.

Those guidelines make it a bit difficult to be perfect, don't they? But they work. Harry never finished his Hogwarts education, but he still learned a lot of magic and ended up saving the world. In that spirit, we, as PLTL leaders, can still have productive, fun sessions and help our groups learn a great deal without being perfect. So, here are a few tips on how to be awesome leaders without doing everything exactly, perfectly, right.

First, let's consider the Round Robin problem-solving strategy. It can be really, really hard to do Round Robin precisely the way it's supposed to be done – having one person do one small part of the problem, then moving on to the next person and part of the problem, and so forth, so that everyone contributes equally. Sometimes your group will go off on a tangent and start talking about the details of one part of the problem, and then the group's work on that problem degenerates into a big, whole group discussion. Or other times one of your group members will ask the others for help in solving their part of the problem, and then suddenly that person becomes the scribe while the rest of the group instructs him or her in what to do next to finish the entire problem.

Sure, it's important to try to follow the guidelines of all of the various problem-solving methods, so that you can expose your group to many different group approaches, but just remember that it's okay if your group deviates from the exact methods occasionally. In fact, this can actually end up helping your group, since it will allow them to develop their own methods of problem-solving – ones that really work for them – and make them think a little more for themselves. (Seriously, Harry Potter rarely ever did anything the correct, conventional way – such as choosing to Disarm rather than Stun or kill in the face of death – but he managed to survive and succeed in his own way.)

Also, let's take a look at questioning strategies. As PLTL leaders, part of our job is to ask our students a lot of conceptual questions, to make sure that they really understand the reasoning behind how to solve the problem, and are not just following a defined set of steps to getting the right answer. This can be incredibly difficult as well because it can be hard to balance addressing a specific point without leading your group to any certain answers, and sometimes your group is on a roll and it's just awkward timing to pause and ask an involved question.

As a result, maybe you won't ask a lot of questions during one particular session, which is completely fine. A lot of times, you can actually have a better session if you don't have all the perfect questions and answers because that gives your group a chance to ask some deeper questions and lead their own discussion. This can also greatly help your group, since it forces them to target the important issues without having you guide them every step of the way, which really makes them think about the material in new and good ways. (It's like the perfect question is a certain magic spell. Take *Alohomora*, for instance – if you know it, then you can unlock almost any door and solve all the problems, but if you don't, you can still work towards opening the door to enlightenment through other methods and learn a whole lot more along the way.

Often times, it works out better just to let your group follow its own natural course of action without trying to stick exactly to the “rules” of PLTL perfection because it'll let your group members approach the problems in their own unique ways. While our job is to provide guidance and help facilitate their problem-solving, it's okay to step back as a leader, sometimes, and let them lead their own group work together. A lot of being a great PLTL leader actually involves not actively leading a lot of the time, – and hence, not being the “perfect leader.” So, can you be a better leader by actually *not* being perfect? I think so. Harry Potter was anything but perfect, but he was still the “Chosen One” and the golden boy of the Wizarding World. So let's be like him in our PLTL journeys – perfectly imperfect, yet great.

**You Don't Have to be PREfect: Showing Your Muggle Side
by Colleen Yard**

So as you prepare for your first couple of sessions you're probably a bit nervous as to what exactly your group members will expect from you as a leader; I know I definitely was. However, once I remembered that PLTL is really just a time for a group of students, which includes the leader, to come together and review important concepts, I relaxed and really began to enjoy being a leader and interacting with my group members. Remember, nothing ever goes exactly as planned, so it's better to be prepared rather than focus on being a "perfect" leader.

First off, don't feel pressure to be some sort of all knowing source of information on the subject that you are a leader for; let the students look to each other to help figure out some of the tougher problems. Although I'm sure you are all very intelligent students and feel very comfortable with the material, sometimes it is best to hold back and let the students' reason through the steps. Initially, the students will constantly look to you for answers and will want you to explain anything they even have the slightest confusion about. In order to diffuse this pressure to be "perfect," encourage students to ask each other what they think and to come to a consensus. In the long run, this will make students much more confident about their problem solving ability, and they will want to continue coming back to PLTL because they see the value of working in a group. Therefore, by realizing that you are not expected to be some sort of "super-genius" in your subject area, you can have a lot more fun helping students get comfortable with the material and each other.

Also, don't expect each session to go perfectly according to plan, because your group's dynamic can always change the flow of the session. For example, if one of the problem's solving methods is "scribe," but everyone seems really confused and doesn't know what to tell the person up at the board, then it might be best to switch up the problem solving strategy. I remember one time during a scribe problem when the girl who volunteered to be scribe went up to the board after we had read over the problem and not a single person told her what to write. In order to break this silence, I laughed it off and told the group that we were going to break the problem down into parts and solve it "round robin" instead. By having each person do a very small part of the problem, they began to finally see the connections between the three different concepts the problem was addressing, and their previous frustration about the question was diffused. Because sessions will often not run exactly according to plan, it is best to have some

ideas about how to address the tough areas of the problem set before you start so your group can learn and be productive without getting too frustrated with the difficult problems.

Finally, remember that, above all, everyone in the group, including you the leader, is a student, and therefore it is completely okay to make mistakes. This is true because, oftentimes, the good way to learn is by understanding our own mistakes and the mistakes of others. That is why in PLTL it is often best to let your group go through the problem solving process for each question without any strong guidance from you (unless they are making extremely grave conceptual errors). Even if they make minor calculation or conceptual errors along the way, by constantly asking them to justify their answers, the students will really take the time to look and see if they made any mistakes, and if so *why* they made those mistakes.

Overall, just keep in mind that PLTL is a group of peers who are all there to learn something, so it is best to present yourself as a successful, normal student who is there to help and guide if necessary, instead of some all knowing “perfect” student. By encouraging this relaxed atmosphere, the group members will be more open to learning and getting to know each other, which will lead to fun and productive sessions.

**Is that Butterscotch or Booger?: How to Recognize Differences
by Sagar Chokshi**

As students at the incredibly diverse microcosm that Wash U is, I'm sure you've reached at least two realizations about the human condition: First, that all people are unique (of course, not everyone can be as awesome as the author of this essay); and Second, that every student enrolled in chemistry, calculus, or physics possesses distinctive learning styles that require personalized needs and adaptations from their peer-leaders in order to effectively and resourcefully achieve in their respective courses.

Obviously...

“JK, Rolling” on the floor laughing. I apologize for the pun, but something in this essay had to acknowledge to the theme of this handbook. Anyway, picking up on learning styles and being able to work with different student types are traits that rarely occur innately in peer-leaders. These skills need to be honed and developed through many interactions with your students. It can take time, sometimes an entire semester, but you really need to get to know them and to figure out how to best progress their problem-solving strategies. That's not to say that each student has a single learning style; a learning style is a preference to employ some type of approach to a problem, and different problems may merit different approaches. The key to being an effective peer-leader is to use an assortment of teaching strategies to complement a wide array of learning styles. In SAM, you'll learn about many dichotomies in perceiving, processing, and understanding information such as visual versus verbal, active versus reflective, sensory versus intuitive, and sequential versus global. No one side is superior to the other and most students will exhibit a middle ground between the two extremes. It is your job to ascertain the proportions of each characteristic in your students. If you can sharpen this ability to even half of the proficiency that this author has in analogy-making, you'll be well on your way to being a great peer-leader. That said, it may seem sort of difficult or impractical to define each quality in your students, but there are a few tools that you can use to make this job easier.

What I've found to be a more reasonable approach to becoming familiar with the inclinations of your students is to observe how they perform and respond in the problem-solving strategies. For example, if a student seems to work well during scribe, he or she may be more verbal than visual; and if round robin is the student's forte, he or she may be more sequential than global. You can also note how they answer certain types of questions of the problem set.

Sensors may respond well to practical calculations and facts. These problems may demand the application of a well-established procedure or approach. On the other hand, intuitive-prone students may prefer abstract theories and imaginative interpretations, such as alternative universe problems. To figure out if the student is more active or reflective, just look at how they work: the active prefer dynamic groups while the reflective favor contemplative individuality. All-in-all, the efficient employment of these educational apparatuses enables us, as escorts for accomplishment, to empower our apprentices with the awareness and experience to achieve the absolute acme of their academic aims.

I intend for the astoundingly scholarly, potentially life-changing, and occasionally superfluous words of this essay to serve as a guide for becoming more familiar with the learning styles of your students. If consciously putting these techniques to work is a problem or doesn't fit with your personal style as a peer-leader, it's not a bad idea to keep the underlying ideas in the back of your mind while conducting your sessions. However, if these words have offended you in any way, think but this and all is mended – that you have but slumber'd here, while this essay did appear. And this weak and idle theme, no more yielding but a dream.

Dealing With Different Learning Styles by Dan Cole

So you've reached the middle of the semester and by now your group should be running fairly smoothly. The fact that you've become more comfortable as a PLTL leader leaves you room to try to fine tune your group and have it work as efficiently and effectively as possible. One way to do that is to make sure you cater to the learning styles of each of your group's members.

The first thing to do is take note of what role each of your students has taken in the group. If your group is anything like mine, there will be the students who like to jump into a problem and get started. There will be those who like to sit for a minute and figure out where a problem is going before they write anything down. According to Felder's Model of Learning Styles, two ways that you can interpret how your students learn are based on what type of information they best take in, and how they like to process it.

Some students work better with "sensory" information – they like evidence, things like graphs, demonstrations, charts and tables. Other students work best with "intuitive" information, and may focus on underlying concepts to help themselves understand the material. Notice that the PLTL system leaves you opportunity to work with both of these styles. We start each session by writing equations in the board, which would be a good time to discuss concepts such as how the equations are related and when each applies. Then we start each individual problem by drawing a picture-- perfect for those that prefer the sensory information. Keep this in mind during your session, and work with both as much as possible.

Once students have gotten their information, they need to process it. Again, according to Felder's model, some students process new information actively, by discussing it or testing it in some way. Other students process it introspectively, by turning the information over in their heads and considering it before they try anything. Often times the active learners will overwhelm the introspective ones, insisting that the group jump right into the problem and start writing things down. It is ok to let this happen sometimes because you do want to give the active learners a chance to process the information. However, one thing to try would be to have the group think about the problem for a minute or so before anyone writes anything down, and see if this gives the introspective learners more of a chance to participate. Another option would be to take advantage of round robin, and set it up so that the active learners go first and the

introspective learners go last. That way by their turn they will have had time to consider all angles of the problem and will be more comfortable with their contribution.

The most important idea here is not the suggestions I'm giving, but simply the idea that it is important to be mindful of the learning styles in your group. You can't cater to every learning style all the time, but if you are conscious of the fact that members of your group do learn in different ways, it will help you create PLTL sessions that help everyone learn the way they do best.

Learning Styles from a PLTL Perspective by Greg Ewing

As a PLTL leader in any subject, you are bound to come across various types of people. In a group setting, different personalities and learning styles come to light and may create problems for you and your PLTLers. The stereotype that may immediately come to your mind is the loud and talkative kid versus the shy and quiet one. However, it is nearly impossible to group an individual into a single learning style category. Psychologists have come up with numerous methods and tests to help describe one's learning style, but most would agree that there exist certain tendencies that occur among similar "types" of learners.

First off, I must remind you that nobody learns "better" than anyone else. Try not to favor those students with a learning style similar to your own. People learn differently, and therefore, you must do your best to engage everyone's brain. This is not easy, especially as a new leader, but give a solid effort and you will soon improve.

From one perspective, there are three basic types of learning styles called visual, verbal, and kinesthetic. Visual learners benefit the most from diagrams, charts, and graphs. Verbal learners will excel in environments where lecturing is a primary teaching method with extra help in the form of discussion groups. Kinesthetic learners benefit from movement and interactive activities. In other words, they learn by *doing*. Thinking about these three learning preferences from a PLTL perspective can be challenging. You already know that the leader's role is not as a professor lecturing students, so the verbal learners will have to be content with discussion. On this same note, be sure to emphasize discussion among your students whenever there is dispute. Kinesthetic learners will see success in the role of scribe because they will be up at the board writing the work for the group. It's also important to make sure work gets up on the board for everyone to see regardless of the problem solving method being used. The visual learners may be able to gain knowledge from any drawings or even arrows showing the order of steps used in the solution of the problem.

So what is the best way to accommodate for the learning styles you encounter as a PLTL leader? Try to address all of them. For example, have your group draw a picture for the visual learners, write out an explanation for the verbal learners, and work through examples for the kinesthetic learners. Some people will understand best by looking at a diagram, while others might gain knowledge by talking with others. Encourage your students to work together because

as a PLTL leader you should not be showing them the solution to the problem. Students should be finding their own path to their solution. Also, realize that each person in your group has variations in their learning style. Don't cater to each individual according to your own diagnosis of how they learn. By concentrating on all of the learning styles, you will help everyone in your group.

Helping Your Students Help Themselves
by Peter Hynes

When first becoming a PLTL leader, it is easy to get caught up in wanting to perform the different teaching methods to the letter and trying to run your session perfectly. Unfortunately, there is no master formula that will allow any session to work, and frankly, it is better that there isn't. Every student has a different learning style, so the way that you approach your session needs to be different from semester to semester, and even from week to week depending on what types of problems are on the problem set. Anything too formulaic leaves out the individual needs of your students, and doesn't allow you to be as effective a PLTL leader as you could be.

So, how do you determine people's learning styles? It is impractical to give everyone in your group a learning style quiz, but it might be helpful if you took a quiz yourself. That way, you will be able to identify what characteristics make people more of one style than another. You might even be surprised what learning styles the quiz says work for you. Often, people are not aware of what styles they gravitate towards, and hence, how they learn the best, so they don't take the most effective approach to studying. If you really watch how your students act in PLTL, you can probably deduce how they learn the best and help them study better than they would otherwise. Here are some key things to look for to determine each learning style, and some practical ways to help them use their own learning styles to study most effectively:

Active vs. Reflective

Active learners are all about doing. They will be the first ones to volunteer for scribe and want to answer all of your questions. They are also the ones that will take the lead most often in pairs and small groups. Reflective learners like to sit back and think about the material first, so they are most suited for round robin where they can take the time and think through the step they are responsible for when discussing the problem. You need to make sure that the active learners aren't dominating the conversation and making you move so fast that the reflective learners don't have time to think. You also need to be wary about calling on the reflective learners too often because you assume their silence means they are not participating; they just need to have some time to process.

Sensing vs. Intuitive

Sensing students are good with the facts and are able to write out every little detail of the problem, so they tend to be very meticulous in round robin. They find it harder to extrapolate

concepts, however, and use them to solve new problems. Intuitive students are all about the application portion, and get bored with each nitty-gritty step. There is a need for both step-by-step solving and application in most college classes, so it is necessary to play to both learning strategies in your session. When you have a problem, write out every gory detail, but also facilitate a substantial group conversation about the topics at hand and how to apply them.

Visual vs. Verbal

This is a pretty obvious one: some people learn better when they see the material, and some learn better when they hear the material. Don't be afraid to have a longer review at the beginning of your session or stop between problems to talk about the major concepts. Also, just because a problem doesn't specifically ask for a graph, doesn't mean you can't ask your students to draw one. Making them think spatially and draw pictures will help them learn the material better.

Sequential vs. Global

Sequential learners know how to do a problem step-by-step, but they often forget why it matters and miss the big picture. Global learners can come up with an answer quickly, but often can't tell you how they solved it, or may not understand some of the details. You can use both of these styles in your session. Global learners will help you get the answer quickly, but then you have to slow down and make sure the group works through every step without leaving anything out. This will help the sequential learner, as well as to make the global person think stepwise. You also need to discuss how you will go about/went about a problem so the global learners can understand better and the sequential learners don't just get lost in the steps.

Accommodating Different Learning Styles by Michele Markovitz

PLTL is based on the philosophy that students will gain a better understanding of the material, whether it is in chemistry, calculus, or physics, by working in a group setting. It is expected that the students in your PLTL group will have different strengths, weaknesses, and learning styles, and it is your job as the PLTL leader to understand these differences and assist the group in order to maximize overall learning. It's a good idea to make yourself aware of the possible learning styles that students may have in order to better understand the dynamic of your group.

Some of your students may learn better by visual devices, such as diagrams and flow charts, while others may benefit more from verbal explanations. The PLTL problem solving strategies, such as round robin, scribe, and pairs, have been designed to accommodate students with a variety of different learning styles. While it is important to try your best to stick to the assigned problem solving method for each problem, what should you do if one strategy is clearly not working for a student? Let's say Susie, a student in your PLTL group, is an extreme verbal learner. The flow chart your group is making for the Bohr Model seems to be benefiting everyone, except things don't look like it is clicking for Susie. What can you do as the PLTL leader to help? If Susie learns best from a verbal explanation of the material, you should try asking the group broad questions to generate discussion on the topic. This way, the visual learners can better understand the material from the flow chart on the board, and the verbal learners, like Susie, can benefit from the discussion that follows the exercise.

Another possible distinction in your group members' learning styles is in active vs. reflective learning. Some of the students may benefit from working a problem and learning as they go. Others may need time to think through the concepts before attempting to work out the problem. Once you begin to pick up on the various ways the students in your group approach a problem, you can strategically match them up when assigning pairs. It is probably a bad idea to pair two reflective learners together; there would most likely be minimal communication and group work. However, pairing an active learner with a reflective learner is an effective strategy. The active learner, who usually dives right into the problem without thoroughly thinking it through, will benefit from the reflective learner, who first thinks about the concepts before beginning to work, and vice versa.

You might be wondering how you can possibly meet the needs of the students in your group when they have a wide variety of learning styles. Don't worry-- it's not as difficult as it may seem. The PLTL philosophy accommodates all learners. If you provide time for your group to think about a problem (great for the reflective learners) and then time for physical, group participation (a favorite of the active learners), the session will be a success for everyone. As the PLTL leader, you should encourage cooperation among the members of your group; regardless of learning styles, getting your group to work together will benefit everyone.

There's More to Life than Jellybeans
by Emily Moseley

Have you ever bitten into a jellybean to discover it wasn't exactly the flavor you expected it to be? Like Dumbledore does in the first Harry Potter movie, when he picks out a toffee flavored Bertie Bott's Every Flavor Bean, only to discover that it is "Alas, earwax!" Believe it or not, you'll probably have a similar experience in your PLTL session if you haven't already. After learning about different "Learning Styles" in SAM, you'll be sure that this one student is the "know-it-all dominating student," while that other student is the "super quiet student." However, after a few more weeks, you'll likely discover that most of your members are not what you initially labeled them to be. Yet your problem is not your inability to judge people's personalities; it is in the act of strictly labeling them in the first place. Many students in this section of the handbook will probably tell you about how to manage the dynamics of different "stock characters" of a PLTL group (such as those I mentioned above). However, I want to emphasize that you must take care in categorizing your members so exclusively, as learning styles are much more complex than, say, jellybean flavors.

Take, for instance, a student named Molly. She rarely pipes up to answer a question, and usually hesitates before giving responses when called on. At first glance, one would likely label her as the "quiet kid." You might even make the mistake of labeling her as one of the "less smart" students in your group. You would be very wrong. It turns out that Molly is actually quite a loquacious individual and she is making an A in her General Chemistry I class. Her slowness of responses is not because she is too shy to contribute, but because she strives to truly understand her problem solving method, rather than rushing to get through it, as some other members of her group do. It is also clearly not because she is less intelligent. It is important to remember as a leader not to automatically associate speed with innate intelligence or correctness. Sometimes the student who shouts out the solution first may be missing a key point in the problem or may have the correct method but not understand the underlying components. This realization once again emphasizes the importance of using the different Problem Solving Methods, in order to ensure the more "deliberate" thinkers also have an opportunity to participate. This conclusion applies to many of the learning styles you'll learn about, in addition to the one I've featured here.

It is clear that learning styles can quickly become very intricate and complex. However, it is our human nature to still attempt to classify people (and everything else) into categories. After all, how many people bite into a jellybean that they don't know the flavor of, think "wow, that's an interesting taste..." and don't immediately pull out their "jellybean cheat sheet" to label what flavor they have? This is why I'm not condoning the study of learning styles. As you've learned in SAM, people *do* think and learn differently, and it is important to understand these differences in order to be an effective leader. However, if you've taken a learning survey yourself, you'll know these labels only apply to a certain point. People learn and act differently based on a variety of other factors, including: how comfortable they are with their group, the type of problem they're working on, their mood, how caught up they are in class, etc. Though there *are* certain traits that are relatively constant, I encourage you to make an effort to get to know your students as *individuals*, not as superficial character or personality/learning types. This can definitely be more challenging, but it will lead to a much more rewarding and effective session for every (forgive my cheesiness) "jellybean" in your group.

Learning Styles by Zach Schmitz

When I was younger my dad always told me, “Nothing worth doing is easy; if it takes some work, it is probably worthwhile.” I have found that this is generally true of most things in life, and PLTL is no exceptions. One of the most difficult (but also most necessary and worthwhile) tasks required of a PLTL leader is to identify the learning styles of the students in your group and how these differing styles can work together.

One of the first things to understand is that, like you as a leader, the learning styles of your students are in a continuously evolving state throughout the semester. Therefore, it is important to be constantly re-evaluating where students are at in their problem solving abilities. Generally, as students become more familiar with the differences between solving problems in high school and at Wash U, they will (hopefully, at least) shift from an algorithmic to a more conceptual approach. Your facilitation style should develop to both challenge and work with the group’s overall approach.

A more difficult art to master is the identification of an individual’s own learning style. The beauty of PLTL is that students are able to learn with and from other students, who may take vastly different approaches than their own. For example, does a student like to get going on a problem right away and learn through trial and error, or would they rather sit a few moments and think about the whole picture? Do they like pictures or verbal explanations? Do they like to work in pairs, groups, or by themselves? Would they rather efficiently and methodically go through a problem set or do they need to take frequent breaks? These are just a few of the many questions you should ask yourself about each student. Some of the answers will be apparent from the onset, but others will take time and close examination of the students and their responses to particular situations. Although different approaches can be taken depending on the group, I would recommend challenging the students by having them work with students who have different styles. This affords each student with the opportunity to understand different ways to think about concepts. One student may even learn a completely new way for him or her to solve a problem or think through a concept. Understanding a particular student’s learning style not only allows you to understand what strategies will benefit that student the most, but also how he or she can contribute the most to the group.

Accommodating Diverse Learning Styles in “Round Robin,” “Scribe,” and “Pairs” Problems
by Rebecca Tsevat

By this point in the semester, you have hopefully learned a lot about your group members. As you have likely noticed, every student learns in a different way. Some students prefer to be exposed to information orally, while others like to use pictures; likewise, some learn best by doing problems, while others are most successful when they take time to process the information conceptually. As you interact more with your group members, it will become increasingly important for you to be cognizant of these preferences. By catering to many different learning styles in your sessions, you will enable each student to get the most out of his or her experience in PLTL.

While problem solving strategies like “Round Robin,” “Scribe,” and “Pairs” have been designed to accommodate different ways of processing information, there are certain things you can do to make these strategies even more effective for your group. For example, “Scribe” and “Round Robin” problems often encourage students to think about problems in a step-wise manner. By writing down all of the steps to a problem or by drawing pictures, students are forced to pay more attention to details and to come up with new ways of organizing information.

In “Round Robin” problems, this process is often hindered when students brush over key steps. Those who tend to process information in a more holistic manner do not always stop to think about the purpose of each step, so make an effort to get them to do so. Ask them to demonstrate why each step they contribute is important, and encourage other members of the group to interrupt when they believe that an important step has been overlooked. Likewise, in “Scribe” problems, the group does not benefit when one or two students dominate the discussion. In order to prevent this situation, it often works well to give the entire group a minute or two to think about the problem before saying anything out loud. By allowing students to have time to think, you create an opportunity for the quieter, more reflective students to actively contribute to group discussions and to feel confident in their ability to solve these problems.

When assigning pairs, it is just as crucial to keep learning styles in mind. I have found that the most discussion is generated when students who think alike are paired together. Those students who enjoy talking about problems as they go along thrive in this environment, because they can feed off of each other’s ideas. On the other hand, students who prefer to process the

information before performing calculations also tend to feel more at ease with other like-minded students, because they are able to move at a more comfortable pace. With this in mind, it is often just as effective to pair students together who do not have similar learning styles. Being able to think about problems in more than one way is important, as it leads to deeper understanding. If you do decide to pair students like this, encourage them to talk about their strategies before they write anything down, and prompt them to think about the problems in different ways. For example, if a particular question places a lot of emphasis on calculations, ask them to talk about how they could represent the key concepts in pictures or in words. In doing so, you will challenge your group to apply the concepts they have learned in lecture to new situations.

Although it is important to be aware of differences in learning styles, do not try to categorize your students into discrete types of learners. The strategies students use may depend on the situation or on the particular subject they are studying; in fact, it is often advantageous to be able to organize and process information in more than one way. When preparing for each session, make a list of four or five questions you could ask that would accommodate a variety of learning styles. By creating an environment that promotes diversity, you will not only help the students to develop more confidence in their own abilities, but you will also encourage them to value the learning preferences of other members of the group. The supportive, accepting atmosphere you establish will lead to increased cooperation and respect among the students, allowing PLTL to feel like a community of learners rather than simply a study group.

Shaping the Questions by Sarah Deitz

Asking questions. The concept seems fairly straightforward if you think about it in terms of everyday life, but the significance is elevated to an entirely new level when placed in the context of the PLTL session. Questions, if used correctly, form the backbone of the PLTL experience, prompting students to delve deeper into the subject matter and consider angles that had never before occurred to them. However, the line delineating the types of questions that prove to be most stimulating for your group members is a precarious one. If you ask questions that are too pointed or “closed,” the students are led directly to the anticipated answer without being given the chance to explore other possibilities that may ultimately enhance their learning experience. However, if your questions are too broad and general, the students are left confused and foundationless as they desperately flail around without direction, hoping to hit on something that may relate to the subject at hand. The way in which you let the questions play out within your session can have a great deal of influence on the student learning that takes place.

The first step toward being able to ask the right types of questions is to be prepared. Be sure to review the material covered in the week’s problem set thoroughly before your session. Ideally, you should do this before going to PAM each week. Go through your notes and make sure that you have a firm grasp of the underlying concepts. If something still seems a bit fuzzy to you, make sure to consult with a fellow leader or bring it up in PAM. You don’t need to be a guru of chemistry knowledge, but you must understand the essential concepts that are involved. In addition to using PAM as a review, you should make note of a few questions for each problem that you want to be sure are addressed. These should include questions that inquire into the conditions necessary for applying a given equation or model, questions that prompt the student to explain a concept in his or her own words, and even questions that simply ask students “why?” This exercise really is key; although you certainly cannot predict or dictate the exact manner in which your session will proceed, making sure to incorporate these pre-determined questions will help to ensure that the students leave the session with a deeper and more complete understanding of the subject matter.

Once you are actually in the session, it is vital that you recognize the importance of giving students the time and room to think critically about and discuss questions with which they may struggle. After you ask a question, it may be tempting to jump in if your group members

seem to be having some difficulty responding; you might be eager to exhibit your knowledge of the material or desire for the students to emerge from their confusion and move forward with the problem set. However, you must learn to recognize how powerful a prolonged silence that extends beyond the zone of “comfortable” can encourage students to really think about the concepts at hand and come up with some really insightful ideas or conclusions. The silence will feel awkward, both for you and for your group members. Your students will look to you for guidance and probably even ask you questions. Yet despite any inclinations you may feel to the contrary, you have to deflect these questions back to the group and let the students “stew” for a bit. Once they realize that you are not going to step in and save the day every time, they will take it upon themselves to work their way out of the predicament. This process will likely be painful and time-consuming, but the learning that takes place through discussion is ultimately much more effective than any that results from an explanation on the part of the leader.

Having the Talk by Emily Feder

You know the drill: despite telling your group members over and over again that you can't give them solutions, they ask you what to do. Or, instead of looking to the group to ask if they did the work correctly, they look to you. There are several different ways to tackle this problem. You could decide to give the group a short talk at the beginning of a session that explains the PLTL philosophy again and explains very explicitly what you want them to do if they are not sure how to start a problem or have reached a solution but are not sure if they are correct. Remind them that PLTL is supposed to develop their team-learning skills and that they are supposed to work together to solve problems. But what if you are several weeks into the semester? It might be awkward to reiterate a talk that you have already had—you don't want to sound like an admonishing teacher, after all. Chances are that the group membership has fluctuated over the first few weeks, so you could tell them that you want to go over the PLTL philosophy now that the membership has finally settled. Or you could say that your PLTL adviser wants you to go over the philosophy with your group so that it doesn't sound as if the directive is coming from you.

For another approach (or if you have already given the speech), just don't back down. Every time a group member looks at you, be ready to deflect the question. Here are some responses you can use. If the group does not know how to start, tell them to, "Take a look at your notes," or ask, "Has your professor done a similar problem in class?" If they are working in pairs or in small groups, you could tell them to ask another group. If the problem is a scribe or round robin problem, you could tell them to ask the group for help. Remind them that your job is not to answer these questions—they should address their group members. Also, make it hard for the group members to look at you. Sit down at the table in the back, or stand out of the way, out of eye contact of the person doing the problem. I know you can feel like you keep doing these things, but yet nothing has changed. Just keep using these techniques—it may take a few weeks, but they will eventually (hopefully) learn that you are not there to answer their questions.

Asking Questions, Sparingly **by Jake Friedlein**

In my first few sessions as a PLTL leader, I was very concerned about asking good questions of my group. I was careful not to give away answers but rather to lead the students to the answer by asking questions. Soon I realized that I had been asking too many questions and guiding the group too much. Though I hadn't been giving them answers, the students in my PLTL group began to rely on my nudges toward the answer. I didn't realize why the students were becoming more dependent on me until I read in our handbook some advice from another PLTL leader who had made the same mistake. Now I am passing his advice on. Don't ask too many questions.

Although it is important not to ask too many questions, sometimes asking a question can truly augment the learning of the group as a whole; therefore, it is important to recognize when the right time to ask a question is. One instance in which asking a question can be helpful is if the students are not all on the same page at the end of a problem. In this case it might be important to ask if everyone understands how the problem was solved. Another approach might be to ask a specific student to summarize for the group the steps for solving the problem. Or, if one student doesn't understand what was done, ask another student to explain. Another way to get the students to interact with each other is to ask if anyone has anything to add to the group's answer. Finally, remember if a student asks you a question, always redirect that question back to the group.

While redirected questions and questions asking the students to respond to each other are hopefully the ones you'll use the most, sometimes it is beneficial to ask questions related to the content of the problem at hand. Typical content related questions might include: "When can we make this assumption," and "Is this equation valid?" Other questions can be asked to encourage the students to get a deeper understanding of the question. Questions with this purpose might ask the students to try to think of an example of how this problem relates to everyday life or how different problems relate to each other.

Trying to recognize when to ask content related questions can be difficult, so it is best to plan ahead. For instance, while you are doing the problem set in preparation for your session, try to identify areas where deeper understanding is important and pay attention to the questions that other PLTL leaders bring up during PAM. It may even be helpful to brainstorm some questions

with other leaders before your sessions. Planning ahead like this will make you better at asking questions in your PLTL sessions, but remember, even if you have a number of questions to ask, don't feel like you have to ask them all. It is generally better to ask fewer questions if possible.

A final piece of advice I'd like to give regarding asking questions is be patient. If you ask a question and nobody responds, don't immediately try to rephrase your question or give a hint. Instead, just wait a little while. Give the students a chance to think about the question, and chances are they'll figure it out on their own.

Like most aspects of being a PLTL leader, asking questions requires preparation, patience, and restraint. However, if you remember the PLTL philosophy and have confidence in the students, you'll find that asking good questions isn't too difficult.

Questions about Questions? by Zoe Haemer

You have probably spent time thinking back to when you were in PLTL, trying to decide what about your PLTL leader was helpful, and what you wished they had done better. Odds are one of the first things that may come to mind is, “I wish they would have just told me if I was right!” In fact it can be quite hard not to tell the students in your group what they’re doing wrong. What kind of peer leader would let students leave with a wrong answer? But as you will start to learn, it is the fact that you don’t give away the answers and correct the minor details that makes you a good peer leader. Although it might be hard to see a struggling student, the PLTL philosophy teaches students how to search for the answers, so when they are in the middle of a test, and they get a problem that they have never seen before, they understand how to use basic concepts to address it.

So do you get it? You are supposed to play dumb and let them figure it out. But how exactly do you do this if your group has no idea where to start? What if they get the completely wrong answer? How do you point them to their mistake without pointing out the mistake itself? Playing dumb is not as easy as it sounds, so below are the who, what, when, where and why of asking questions:

Who?

As a peer leader, it is your job to involve all the students, and sometimes it is exactly that which can start the group in a new direction. In the first few weeks, pay close attention to the student’s strengths and weaknesses. Later, when a student, or the group, comes across a problem, try directing a question toward a person that you think could help the group. Sometimes the quietest people have the best ideas. They just need to be asked in order to share them.

What?

The questions you ask should not give students the answer; look back on your PAM notes and think of facilitating questions to ask before the session. If all else fails, probe their knowledge by asking “why?” Sometimes students’ explaining the problem is all they need to find their errors.

When?

It is important to ask facilitating questions throughout the session. If you only ask questions when the students are wrong, they will immediately know they did something wrong. By asking question throughout the session you can insure that the students learn to always look at their answer with a critical eye, helping them learn valuable problem solving skills.

Where?

Ask questions throughout the problem set. Keep students on their toes by constantly asking new students to reinforce each other's ideas. This prevents problems because students will give a second look at their work and problem solving. Also, it keeps students engaged even if they finish early (i.e., they can go back and check their work)...

Why?

Hopefully, by know you know why!

Asking the “Right” Question by Marieke Jager

Asking good open-ended questions is one of the most challenging tasks of being a PLTL leader. Like the subtle art of Divination, there is no “right” way to do it. No spells you can memorize, no tried and true recipe. You have to read your group, figure out what it is that they are struggling with conceptually, and ask the right question to bring their problems to light.

Luckily it’s not quite as bad as it sounds. Hey, if people can read tea leaves, reading people shouldn’t be impossible.

The most important thing to do (and I can’t stress this enough) is to simply *pay attention*. Listen to your group’s discussion and you’ll pick up on all kinds of stuff. Often someone will be explaining something to another group member, and you will pick up something slightly wrong in his or her explanation, or an assumption they’ve made. These are always great things to elaborate on. A mistake in wording is often a clue to a deeper mistake in understanding. For example, the person might be speaking about the energy of the electron, when what they really mean is the energy of the atom. You can let this go, guessing that they probably just misspoke, but it is better to clarify lest their explanation confuse someone else. Another great time to ask a question is when a group member makes an assumption that can’t be generalized to all cases. Even if the assumption is correct in that particular case, it is always a good idea to ask the group when this assumption can be made. Often people will assume things without even thinking about or realizing why it is true.

If your group is brilliant, or is doing very well with a particular problem set, sometimes these issues won’t come up. In that case, you can always ask them to tie the current concepts to ideas they’ve learned earlier in the semester: “How is this idea the same or different from that idea?” “How does this relate to...?” “Why is this a better method than...?” These are great questions, and lead to a better understanding of the material. Generally you will maybe ask one question like this in a session, but more often you will be trying to extrapolate on a mistake or assumption.

But here’s another piece of advice—don’t see the Grim in every error. What I mean by that is, don’t see disaster every time someone makes a simple mistake. You can’t turn everything into a big discussion; if you do, your group will never finish the problem set. Only step in and ask a question if you think: (a) the concept is something important, (b) that it is

something that a lot of the members are probably confused about, and (c) that one of the other group members won't correct it. Remember, PLTL is about the group interaction. You are there as a facilitator, and you should only step in and ask a question occasionally, not every single problem.

So that gives some insight into the "when" and "what" to ask. Equally important is *how* to ask a question. Do you turn to a group member and say, "So tell me Sally, how does...?" No. You don't want them to tell *you* anything. You want them to talk to each other. Some general phrases I use a lot are, "so could you explain to the group why X is true," or "what do you guys think about Y?" This tells them clearly that they should be talking to each other. If the person talking turns their attention to you, make a point of looking at someone else in the group, and chances are, their eyes will follow yours.

Asking good questions is challenging, yes, but you'll get a feel for it soon enough. If you're worried, you can always think of questions in advance. One of the best places to identify the tricky parts of a problem is in PAM. If your PAM group gets stuck on something, it is likely your PLTL group will too. Overall though, don't think about it too much. Pay attention to your group, and figure out where it is that they need help.

Play it Cool, not Dumb
by Max Miller

So you have completed Calculus, Physics, or Chemistry and obviously possess a pretty strong comprehension of the material in one of those classes. So now it's your turn to go out and tutor every needy college student in the world, right? Well in the event that you had not picked up on this from your days as a PLTL student or from SAM, you will not be doing much teaching. In fact, you will probably hear the word "facilitating" used far more often in SAM than the word "teaching." So what's the difference and how are you supposed to do it? (If it isn't overwhelming enough to have been challenged with the task of leading a productive study group), now you cannot directly influence your students' understanding of the material? Well, it certainly isn't magic, and I could be as simple as asking a couple of key questions.

What you should realize about your PLTL group is that getting your students to speak is about as easy as casting a perfect patronus on the first try. The PLTL selection process is random, and most, if not all, of your students have not met each other outside of PLTL. The important thing to realize from this is that the silence is not your fault and is completely natural. Still, it is your responsibility to engage your students in meaningful conversation; however, often reaching this point requires some unproductive chat. What I've noticed is that PLTLers tend to lack confidence in their ability to reproduce what they have learned in lecture in a group setting. Obviously, they won't say anything unless they know that it's correct. What better way to get your students talking than to bring up something that they are confident about-- anything *unrelated* to school? Once you at least have them talking, transitioning into discussion about the problem set feels natural.

So hopefully now you can get your students to look at each other, but you can't rest quite yet. Just because your students are actually speaking to each other does not mean that they can completely solve the problem set without some outside influence. Often, your students will look to you for advice if they are stuck on a particular concept or problem (or they might simply stop talking). You obviously can't answer their questions directly, and if the situation is particularly bad, relying on a student to salvage the discussion is out of the question. The Socratic Method will be your best friend here, and this is where your understanding of the subject will shine. You must possess enough mastery of the subject to pose questions in response to your students' concerns that will trigger their recollection of key concepts, yet enough restraint to not offer

away the key to solving the problem. Often, a thorough review of the past week's material constructed prior to working through the problem set is enough to answer most questions. If the review is written on the side of the board, you will be able to quickly refer your group to it.

Another reliable way to get your students talking is to simply insist that they throw their current trains of thought out on the table. Again, confidence is a huge factor. Despite an initial lack of conversation, nine times out of ten at least one member of the group will have something to contribute to a problem... Even if what the student has to say is inaccurate, another student will correct him or her and rekindle the discussion.

A PLTL leader will ultimately attempt to inspire enough confidence in the members of the group to the point where discussions occur free of intervention by the leader. As you should soon realize, it will be judgment call as to how much information you will reveal and still meet this goal. As you become more experienced and have more sessions under your belt, you will get a feel for how revealing you may be. Asking appropriate questions becomes less a matter of following a set of preset guidelines and more a matter of experience.

They're All Staring at You.
by Anna Moseley

Yes, they are stumped on how to draw vectors, clueless about integrals, and insist they've never heard of a particle in a 1D box. So what do you do? Running up to the board to spout theorems and formulae may seem like the quick and easy solution, but will likely make your students give up sooner next time when they know you will just give them the answer. So you start asking them questions instead. But where do you start? Finding a balance between yes/no questions that tell too much, and open-ended questions that create blank stares can be one of the greatest challenges of PLTL-leading, so here are a few tips to consider:

1. Start **general**. Ask students questions to get them thinking in the right direction, and then narrow the focus until someone gets an idea. Sometimes a student will be on the brink of the correct answer and just need a small hint, while other times the entire group might be lost, and you will have to adjust your question style accordingly.

2. Start with **what they know**. Sometimes just helping students to organize their thoughts can help generate ideas. Regardless, it can help build students' confidence that they do know something and help them build connections between what they do and don't know. It can even spark discussions about important concepts and help reveal underlying misconceptions that may be contributing to the problem.

3. **Follow up** on good ideas. A quiet student might throw out an idea that is dead-on-target but gets ignored. By asking students to further explain their idea, you can lead the group in the right direction without actually providing any information yourself. Not only that, but it will help your group learn to listen to everyone's ideas.

4. Leave **wait time**. This can be the hardest part of asking questions: learning to discern between students who are thinking and those who are just staring blankly waiting for someone else to answer. However, always remember that even though you might speed through the problems in PAM, this is the first time for these students, and it may take them a little longer to figure them out.

5. Once students start to "get it," turn the problem back **over to them**. Try and redirect the attention away from you as soon as possible, as this will minimize the potential "teaching" time and maximize group interaction.

Ultimately, the more that you can help students discover for themselves, the more confidence they'll build that they can solve problems on their own. Careful question-asking can go a long way to making this a reality and helping students learn *how* to think-not just *what* to think. So the next time that your group insists that the professor never taught them matrices, or Newton's first law, or effective nuclear charge, you'll be able to jog their memories and get them through a problem they claimed that they couldn't solve.

Advanced Potion Making by Charlie Barrows

Welcome to Advanced Potion Making. I'll be stepping in today for Professor Snape, who is out doing something horrible to Professor Dumbledore. Today we'll be talking about how to draw your PLTL students to your sessions by employing the art of the three F potions: Fun, Fear, and Food.

It's all too easy for a PLTL leader to focus solely on guiding students through the weekly problem set. This, however, leads to a serious environment that students may not look forward to as the semester progresses when they have more and more responsibilities. Your weekend session should be fun. I mean, it is the weekend, right? At the beginning of your session, don't launch directly into the concept review or the first problem. Instead, take some time to talk to your students and actually get to know them. When you show students that you care about their success, they will also begin to care about each other's learning. This strong group mentality will help encourage both better teamwork and a better attendance record. Also, consider taking a break in the middle of your session to have a quick game of Hangman or Rock, Paper, Scissors. A bit of fun potion at PLTL is never a bad thing.

The potion for fear can be especially potent, so be careful not to mix it too strongly. It can be quite effective after the first exam when most, if not all, of your students will be at least a little worried about their grade. Now is the time to remind them of the importance of attending each PLTL session not just for the development of problem solving strategies and teamwork, but also for the course review. You may ask them to think about ways in which earlier sessions helped them on the first exam and how much they depend on your wizardry to guide them through the concepts and calculations. Fear of missing a session, and its consequences for their performance in the class, will promote regular attendance.

Food potions don't have to be liquids. In fact, I would advise against bringing drinks to the sessions. With the amount of moving around and shuffling of papers, something is bound to spill on your students' precious notes. Solid potions can take many forms however. For example, providing food for each session certainly helps draw your students back and keeps them alert for the two hours that you have. If you don't have a ton of extra meal points, consider bringing food for the first few weeks and then creating a sign-up list for your students to bring food to future sessions.

The first food potion is the patented sugar ploy. Load your students up with chocolate, candy, and other sweets, and they will be sure to love PLTL and the energy boost that they begin to associate with their sessions. Second, there is the salt potion. Salt has been proven to help learning and memory, so trail mix or a bag of potato chips can be beneficial, even if they're not conventionally considered healthy. Be careful not to use the same potion every week though. Some members of your group may not like an option one week, but if you always switch it up, they won't be turned away from the group simply because of your food choices.

That's all the time we have for today's class. Remember to use the three F's and your students will continue to be drawn back to your PLTL sessions.

Keeping Your Students Interested in PLTL
by Margaret Bonfardin

In your first few meetings, remember that many of the students are new to Washington University, and all of the students are new to the classes they are taking. Everyone comes to the meetings with enthusiasm and ready to work and learn. However, around the middle of the semester, students have gotten accustomed to school and their courses, and they might be tempted to stop coming to PLTL meetings. For example, maybe they did well on the first exam, maybe they are getting worried about their other midterms, or maybe they're getting bored with the structure of the meetings. Whatever the case may be, as the leader you must do something to make sure that the students continue coming to PLTL. There are several ways to keep the students in your PLTL enthusiastic about participation.

One idea is to be honest with the students about the temptation to stop attending. Emphasize the statistics about how being in PLTL has a positive influence on students' grades. Even if they did well on the first exam, the material will become more challenging as the semester goes on. Also, discuss the importance of having a good-sized group to the PLTL philosophy, and how if only one or two students show up at the meetings, it is much more difficult to have a good discussion about the concepts and problems. Remind them of the contract they signed at the beginning of the semester to be in PLTL. This discussion can be during one of the meetings or you can send out an e-mail to your students. It's better to do this before attendance becomes a problem instead of after, but it's never too late.

There are also many ways to make PLTL meetings more interesting and fun, which will also keep attendance up. A snack is always a great incentive to come to PLTL, and if the students have this to look forward to, they will be more likely to show up. You can do little things during the meeting that will change up the pace and break the routine. For example, Do the problems out of order or choose to do a problem with a slightly different problem-solving strategy than assigned. You can also take a break in the middle of the problem set and let your students chat for a few minutes. You can always ask the students what would make the group meetings go better for them while still sticking to the PLTL philosophy and completing the problem set in the two hours...Try to work in their suggestions for improving the meetings. You might also find it helpful to put yourself in your students' shoes and think about reasons you would continue attending or stop going to PLTL if you were in your group.

Keep in mind that you might also be happy with how the first few meetings went and ready to coast because you are getting bored with PLTL, or because you are stressed about your classes and midterms. One way to compensate for this is by preparing well for the meetings and being enthusiastic the whole time to keep your students engaged. PLTL should be a time for the students to work together to review material in a good learning environment. If you keep things fun and relaxed, the students will keep coming to the meetings and learning the material.

**Student-Luring Potion
by Lisa Goldman**

For use in the middle of the semester when students are burdened with exams, papers, presentations, and a lack of motivation (i.e., they aren't showing up to your PLTL sessions anymore). Don't hesitate to use liberally.

Ingredients

- -a super sugary cake. Imperative. Or muffins. Chocolate chip, pumpkin muffins.
- -a computer
- -a vial of felix felicis
- -energy
- -enthusiasm
- -a womping willow

Begin by turning on your computer. Open an email, direct it towards your PLTL students, and prepare to write the most intriguing, enthusiastic electronic letter you have ever written. Tempt them with your fantastic baking skills. (Note: if the aforementioned skills are nonexistent, use up some of those extra meal points at Upper Wohl and procure some other sort of delectable, sugary substances.) Also, do not fear to warn them of the intense difficulty of their upcoming exam, and hint (not so subtly), that coming to PLTL is the most obvious way to ensure an excellent score.

Before the PLTL session, be sure to consume lots of sugary or caffeinated substances, before heading over. This will help raise your own energy and enthusiasm levels in order to maximize productivity and student's positive reactions to your efforts. During the session, try to utilize different approaches to how you run the group in order to keep students on their toes and interested. For example, you could make a quick game out of reviewing the material covered in the past week and hand out silly prizes for those who bring up key topics and equations.

If none of these tactics have worked and students are still not showing up for PLTL, more drastic measures may have to be taken. Whip out the computer again, flex your fingers for some serious typing, and shoot out another email. Don't hesitate to intimate that you're hurt that your students have abandoned you and each other during PLTL. Also, let them know about the womping willow you've secretly planted outside their window, and that it will probably rough them up a bit if they don't show up.

Lastly, but perhaps most importantly, gulp down an entire vial of felix felicis. You'll need it if you want your students to show up time after time.

Accio Students!
by Yuan Manfredi

So let's say that you've had a few weeks of PLTL, and everything is going great. Your group is getting more and more comfortable with each other every week, and continues to get better and better at synthesizing new material. What could go wrong? Well, for starters you've got an Orgo exam next week, along with the problem set due Thursday, and not to mention the lab report you haven't done yet. You're getting the hang of this PLTL thing, so maybe it won't be a problem to not prepare for PLTL this week, or maybe rush your group through the problems, so that you can have some extra study time...

If this temptation hasn't already presented itself to you, it probably will soon. As harmless as it might seem to let your foot off the gas, you must keep in mind that your hard work and preparation have been the driving factors to your success as a leader. Also, if you, an experienced upperclassman, have a lot of work to balance, imagine how the freshmen in your group feel. Most of them are probably still adjusting to college, and might even have strong urges to skip PLTL if their leader isn't showing the same enthusiasm that helped start the semester so well.

Even when you dedicate your focus to PLTL, the middle of the semester is still a tough time to keep the group motivated. The biggest thing you can do is evaluate yourself as a leader. Try to figure out the things you've done correctly, and what you could be doing better. If you have any doubts, keep in mind that SAM is a great way to talk about concerns with a group of peers and teachers. As for what to do in the actual session, make sure that you're keeping the students engaged. One way to do this is by breaking up the (occasional) monotony of the subject with a 5-minute break to talk about something non academic. Or, unless specifically told not to by those in charge, mix up the order of the problems to maximize how much you think you're students will get out of the session. If they feel like you're adjusting your approach to the session for their personal needs, they'll be a lot more inclined to attend PLTL for the duration of the semester.

Another simple way to keep your students coming to PLTL is to keep them confident. Students will be much more likely to attend regularly if they really feel like they're getting a lot out of each session. This is a simple matter of making the students believe in themselves. As I'm sure you know the transition to college can take a toll on confidence, so it's important that

despite the occasional sub 40 means and difficult material, you emphasize that they are all capable of doing well in any science class, as long as they work hard enough. It can be easy to get frustrated after several weeks of dealing with freshmen that don't always catch on right away, but just be patient, and stay focused on your job as a peer leader. If you do this the second half of the semester should go just as well as the first part of it did.

**The Midterm Invisibility Cloak
by Lauren Van Dyke**

At the beginning of the semester, attendance rarely seems to be a problem. Most students are motivated, energetic, and willing to put in extra time to do well in their classes. As a result, most of your students will attend regularly during the first few weeks of PLTL. Once classes start to get difficult, however, things will start to change. You will no doubt have a busy week and question why you decided to give up two hours of your weekend to be a PLTL leader. Guess what? If you are questioning why you decided to be a PLTL leader, when those two hours would give you much needed time to study for a difficult test, your students are surely also wondering if attending PLTL is really the best use of their time. You need to convince students that it is in their best interests to attend PLTL every week, even when they are very busy. If you do not communicate this to students and give them the incentive to attend PLTL, attendance will plummet. You will know when an exam in one of the large 100 level lecture classes is coming up because half of your students will mysteriously disappear. Here are a few tips to spice up the middle of the semester to make sure students keep attending PLTL:

First, make sure you are keeping up your end of the bargain. When the semester gets busy, you may be tempted to slack in your preparation for PLTL and be less knowledgeable about the topics being covered. If you are not properly prepared for PLTL, the session will not benefit the students as much. Also, if students do not feel like the two hours they spend at PLTL each week are well used, then they will stop attending. So, even when you have tests, papers, and a mile-long to-do list, be sure to take the extra 30 minutes to make sure you have reviewed the topics you will be covering in PLTL.

If you show up at PLTL one week, and only two of the eight students in your group are in attendance, do not let this pass by without acknowledging the drop in student attendance. For example, if attendance drops and students do not give you advance notice for their absence, contact your students. It is important to remember that when your students' workload starts to increase that they may decide to skip PLTL in favor of doing other work. . There is no need to get angry, simply tell students that they need to attend PLTL unless they have been excused in advance (or they fall ill or have some other extenuating circumstance). For many students, this reminder will make them choose to attend PLTL the following week, instead of skipping your session...

Keep things interesting for students. Trying new problem solving strategies, or mixing up the order in which you go through the problem set, can really help keep each session from seeming so monotonous. Having students create a new problem solving strategy that they will test on a problem can also be beneficial. This gives students a chance to discuss learning strategies with their peers and can be a fun way to mix things up.

Finally, never underestimate the power of free food. A small snack will motivate students to attend PLTL each week (studying for a class while eating free food is better than studying without!), and it will also help keep students' energy levels up during each session. Cookies and candy both do the trick well. If you are worried about spending money on a snack each week, try bringing a snack the first week and then having students sign up to bring food for the following sessions.

Making PLTL sessions as worthwhile and gratifying as possible for students will keep attendance from dropping when the semester gets busy. Follow these tips to keep students engaged in PLTL throughout the semester.

Avoiding the Mid-Semester DeMENTOR's Kiss
by Veronica Willis

There will come a time in the middle of the semester when everyone is suddenly racked with exams, catching up on reading, problem sets, etc, and it may appear that the life and soul has been sucked out of your PLTL group. Attendance may be lower, participation is minimal, and the students just don't seem enthusiastic at all. Don't take it personally, they're just really busy with other things and their minds may not be completely focused on PLTL. It's our job as leaders to make PLTL a fun and enjoyable experience for the group members.

One of the easiest ways to liven up your PLTL group is to mix things up and start doing things differently. If you haven't been bringing food for your group, try it. It makes the students enjoy the session so much more. If the group members see that you've put time and effort into the PLTL meeting, they'll appreciate it more and this may lead to increased participation. You can also try ordering the problems differently. Not only does this prevent students from working ahead, the unpredictability will surprise them.

Another thing that you can do to increase participation and bring the life back to your group is to make sure that you actively involve every student. Make sure that everyone has a chance to speak up and feels comfortable answering and asking the group questions. Instead of randomly calling on students, it may be wise to recognize each student's strength, and call on them when you recognize that a problem utilizes something that he or she does well. This will make the student proud of him/herself and more likely to volunteer when another problem like it comes up.

Another surefire way to make sure the students keep coming to PLTL is to make sure that the group is a place where students feel like they can enjoy themselves and have fun. Spend a few minutes every session asking how students' classes are going or offering them helpful study tips. This little break from the monotonous, "OK let's work on number 1," will make the students feel like PLTL isn't just another homework assignment that they have to finish. The students need to feel like they can go to PLTL and benefit from the wisdom of a peer and have a good time.

If you appear to be enjoying yourself, this rubs off on your group members. You have to remember to not let all the things that you're studying for or catching up on get in the way of being the great PLTL leader that you are. No doubt you have midterms or papers and may be

just as distracted as the group members. If you seem to be aloof, the students will pick up on this, and they will become distracted or discouraged by a PLTL leader who doesn't seem to care about the group. When you show that you care, by bringing food or asking them questions about their lives, your enthusiasm will enthuse your group.

This is Really, Really Important...
by Hanzhi Zhao

So it's the middle of the semester and the novelty of college and PLTL is wearing off. Your students are no longer showing up and quite honestly, you're not that upset about it; fewer people means fewer questions, which in turn means getting through the problem set faster, so yeah-- No. Don't do that.

Here are some ways that can help you work past the mid-semester slump:

Remember, you're a wizard: The middle of the semester is a great time to reflect on why you became a PLTL leader. There are many perks to being a PLTL leader: chemistry review, money, interaction with professors, etc, but the one thing that all PLTL leaders have in common is that we all want to help others survive Gen Chem. During the mid-semester slump, we have a tendency of forgetting that fact because we're so focused on our own exams and our own lives. So when you feel yourself slumping, remind yourself that PLTL is only two hours, you're going to feel so good about yourself afterwards, and your students are really going to appreciate your help. See this is a "win-win" situation.

Charm your students: Okay, so now you're thinking, "I love PLTL...now how do I get my students to show up..." Well first off, make PLTL enjoyable. Even if the first few weeks have been quiet and awkward, it's never too late to improve your group dynamic. Ask students about their week, you'll end up hearing lots of great stories, especially around Halloween. If they don't have any or they won't share any, tell them some of yours. Once someone starts talking, others will join in on the conversation. Opening up and showing your students that you enjoy their company will make them feel more comfortable and they might not dread PLTL as much.

You want to pass your O.W.L.s don't you: What if your group dynamic is great, but students are not showing up because they have an exam on Tuesday and they would prefer to study alone? One thing that worked for me is instilling a little bit of fear in the students. If a bunch of people are missing, you might say something like, "Ahhh, well that's unfortunate that they're not here because we're going to be doing a really helpful review for the exam today..." Make sure you say it jokingly because no one wants a scary PLTL leader who seems to have a vendetta against absent people. Also, during the session, if a student hits a very important point, you might say, "you all might want to pay attention because this is really important and it might

show up on the exam.” Being the studious Wash U students that they are, your group members will automatically become more attentive. If the students realize that they can receive good exam hints from PLTL, they will be more likely to come every week.

Here, have a licorice wand: What if nothing is working? It’s probably a good time to resort to the one thing that all college students respond to: Food! Ask the students what kind of food they like and bring it for them. They’ll be more excited to come because, come on, who can resist free food? Also, during the session, they’ll be more attentive. If bringing food every week costs too much, you can always start a system with your group where a different person brings food every week. That way the person who brings the food will have to show up that week and what they bring will be a surprise for the other students.

So those were some of the things that worked for my group and they work well as guidelines. Of course keep in mind that every group is different and it’s up to you to figure out the most effective way to keep your students engaged during the mid-semester slump. Keep trying because your students will see that you care and they’ll respond accordingly. Good luck!

Finding Your Patronus
by Alex Cambier

Every PLTL group goes through some phases in their evolution of group hood. I've found that things usually don't go quite as smoothly as the on-paper description of the sessions would make it seem. Depending on your group, a variety of problems can develop. Some groups are too talkative and off-topic while others won't communicate at all, many aren't timely in their arrival to the sessions, and every so often you just have a student who is an antagonist and who comes to sit among your group for two hours a week.

My problem was with overall attendance. One of the things you're supposed to do at your very first PLTL group meeting is to lay down the ground rules. A rule that was very heavily emphasized was the attendance rule--stating that after just a couple missed sessions, a PLTL member would have to be ejected from the program. Let me be the first to say that stating this rule only one time will not often be enough to dissuade your group from 'calling in sick' just before an exam (or if they've got the courage they might just tell you they aren't coming that given week). If this happens to you, your first reaction may be to crack down and make an example of this person. Especially at the beginning of the semester, however, you may find that some group members haven't entirely bought into the program. This can persist despite all the delicious food you're brought them (which I strongly recommend doing, at the very least for the first few sessions).

This is where building a relationship with your group is very important. By this point in the semester, you've hopefully become good enough friends with your group members and you can serve them a little bit of 'humble pie' without having them complain about the cooking. It's very important that when you do crack down, you don't do it in a way that might make your group resent you. Remember, you're just their peer leader, not their professor. One easy way to do this is to blame the system; if you tell them it's not up to you and then swing the PLTL 'banhammer,' they can't possibly be upset with you, right? Although this is true to an extent, your students may still possibly dislike you for abusing the power you were given. There's a precarious balance between being a friend and a leader, and it's important to find the proper middle ground so that you have both order and support.

For any issues that arise with your group, I recommend being a bit lenient at first. You can do this by reminding them of the proper rules or behavior while also being forgiving. If the

problem persists, it's best to contact the problem individual(s) about their issue(s)...individually. That way you're not putting them through any seemingly undue embarrassment and you can tell them directly whatever it is that needs to be told. If all else fails and you're really left with no choice but to take drastic measures, then do what you must.

The best way to have a smoothly running group is to have them all understanding and truly buy into the system. I believe the best way to do that is to have them like and respect you as their leader. If a member has been enough of a problem and no form of intervention has worked, chances are your group will also know the problem and will understand and support your decision because they will see that it is for the betterment of the program as a whole. Whatever issues may occur in your PLTL sessions, good luck with confronting them, and I hope that my advice has been helpful!

How to Avoid Hand-Holding in Your PLTL Session **By Alex Drake**

There will come a time this semester in your PLTL session when you will be tempted to take the expedient route rather than the most productive route. A student will ask you a question directly pertaining to a problem. You will have to make a decision. You can give them the answer, which you, in your unwavering and complete knowledge of the subject, will know. If you give them the answer it will surely accelerate your student's ability to solve the problem. You might even teach them something valuable in the process. However, this is a terrible habit to start. This is bad habit to get into with your students and it will become evident in subsequent sessions when you find that, more and more students will look to you for guidance on a problem, rather than asking their group members for help. You can easily become a crutch, with your students relying on you to answer their questions. This can stunt the development of many group dynamics which are essential to the proper functioning of a PLTL group. Avoid this mistake if you can.

The obvious follow-up question to this advice is “what *do* you respond when a student asks you a question about how to do a problem?” Here are a few ideas that can help you respond to your students:

- Respond with a Question

This response can be highly effective for two reasons. First, you deflect the question they asked you back to the group. This takes the spotlight off of you and places it back with the people who need to learn the material. This deflection dramatically increases the odds that students will discuss the problem. Second, you can phrase your response question such that it is a more pointed and illuminating than the question that was originally posed. This form of guidance is relatively hands off and avoids the creation of a PLTL culture in which you answer students' questions.

- Defer to Class Notes

This is a very handy response when you are asked a question which you don't think you should answer. For example, consider the chain of events: (1) a student asks a question of you, (2) you respond with another question posed to the whole group, but no one has any idea of how to respond. At this point, or even before, you can suggest that they look to their class notes or

textbook for some section or even just an equation pertaining to the topic at hand. Often times this is all that is needed to spark constructive discussion on the topic.

- Do Nothing

You'll be surprised at the effectiveness of this tactic when students direct a question to you. When a student asks you a question just be quiet and don't respond. The inevitable tension this silence creates will more than likely prompt someone else to say something. What the person says might be poorly worded, misleading, or even plain wrong, but that's okay. The ensuing discussion will eventually result in a solution of the problem, without any input from you.

If you are reading this thinking "It's too late. I've answered too many questions. I'm a crutch!" you're wrong. You may serve as a crutch right now, but it isn't too late to change how students interact with you and with each other during your sessions. It may take a while to break your students of the habit of asking you a bunch of questions, but you can do it. Start employing some of the tactics listed above at your next session. You'll be surprised how effective they are. Your students have the ability to solve these problems on their own. You simply have to allow them to fumble around without direction and without feeling like they need you to step in and help. Your job as a peer leader is to keep them on track. This doesn't mean streamlining their work and keeping them moving towards the answer. It means making sure they are working, whether it's towards the answer, around the answer, or far afield. Trust that they will make it there without your explicit input.

Quidditch Disasters
by Megan Fieser

Having a team requires constant attention. Players are constantly changing and as the leader, you need to adapt to those changes as they occur. Now you have finally pulled your team together and have been practicing for a while, but what happens when you come across problems? Here are a few tips on how to keep your team as together and productive as possible.

Your Beater Just isn't Keeping Up with the Team and People are Getting Hit by Bludgers: Let's face it; your entire team isn't going to all work at the same pace or even to the same level. Sometimes you may even have one student who really falls behind the pack whether it is because they don't really know as much material or work much slower than the rest of the group. There are a couple strategies that could work, but the fact is, every team is different so you will probably have to mold suggestions to fit with your specific situation. Making this student scribe can work to keep the pace moving quickly and will also allow the student to learn more. The important thing is to make sure the team stays focused. If they help the scribe through the problem on the board without working ahead, they will improve their own knowledge by vocalizing their ideas, and the scribe will learn an approach to a problem and will work it out on their own. In pair problems, you can say that only one person may write the answer on paper. This can stop the faster student from speeding off without the slower. The main thing is to make sure they don't feel too much on the spot, whatever you do. Make sure the group is helping him/her along with the problem. If this person really doesn't know what they are doing, sometimes you will have to move on without them really understanding. However, you should remind them to do the homework problems and read through their notes before coming to the section. Let them know that you don't want to waste their time, and if they aren't prepared for the material, then they aren't getting what they should out of PLTL.

You found that one of your beaters is a secret Slytherin who has finally come out and is now attack: Sometimes you may have a student who likes to argue for the sake of arguing, or likes to make things complicated when they can be simple, or even just likes to go on tangents to the actual topic. It almost seems like this person is trying to confuse the group on purpose. In this case, it is best to continue to another problem when the group has the answer. Try to eliminate the problem within the session, but this situation may require speaking to or emailing the student. It is important to tell him/her that they need to make things less

complicated and confusing. Make sure he/she knows that discussion is good, but he/she needs to stay focused on the topic.

One or more players just stopped showing up every week: This can be a huge problem. Emailing them is a good idea. Make sure that they grasp how important PLTL can be for their grades and understanding of the material. Explain that they are not only harming themselves, but they are harming their group because the lower numbers each week make it harder to effectively do the problem solving strategies.

Overall, it is best not to single people out if it can be avoided. You have a team and you want to keep them working as a team, so separating them into individuals is a last resort option. Speaking to the group at the beginning of the session can be the most effective way of confronting a problem. Email and then individual contact would be the next steps. In order to prevent problems as much as possible, it is vital that you do your best to truly focus on making the sessions fun and productive. Make the students excited to come every day.

The Unforgivable Curses
by Michael Ingber

As the semester goes on, you're going to make some mistakes. You will run into some problems, and you might not know what to do about them. Well have no fear because I am here to tell you how to get out of a few of these dire situations.

The Cruciatus Curse (The Torture Curse): Yeah, I'm not expecting you to literally torture anyone in your group. If this is the case, you should probably not be a PLTL leader anymore, and get some professional help. But when a student is bored, it feels like torture. PLTL should never be like class. It is supposed to be an informal group session, not anything resembling a lecture. No member of the group should ever feel bored. This could happen in two ways. Either you're talking too much or the group isn't talking enough. If you find yourself talking too much, you need to realize that the group really isn't about you. You're just there to moderate and make sure things run smoothly and to facilitate questions. So stop talking so much! If you find that most members of your group aren't participating enough, you need to push and encourage them to work together. Remind them that this is a team effort, and in time your group members will no longer be bored.

The Imperious Curse (The Mind Control Curse): What happens when your group looks to you for all the answers? Looks like you've been making a mistake. Don't worry though; this is probably the most common mistake PLTL leaders make. Giving your group answers is a slippery slope. Once you start doing it, they'll keep looking to you for the answers and you will find yourself giving in to them. Fixing this is simple. Go cold turkey. Just stop giving students any answers. If they ask you if they're right, just reflect that question right back at them. It might make you feel like a bad leader, but in reality you're helping your group.

Avada Kedavra (The Killing Curse): The most serious mistake you can make is making your group disappear forever. If certain group members stop coming to PLTL, you need to fix this problem. Make sure you have their e-mail addresses, and send them an e-mail. Be nice, but be strict enough to make sure they'll take you seriously. Remind them that they signed a contract at the beginning of the semester saying they would keep up attendance. However, make sure not to take their not showing up personally. Remember that no matter how interesting and fun you make your PLTL group, your members are still giving up two hours from their weekend to do work. Some people just don't like that.

Confronting Your Group about Following Problem-Solving Strategies by Allison Li

By this time in the semester, you have already led a few PLTL sessions and have probably realized that the job is not as easy as it seemed when you first signed up. One of the biggest challenges for new and experienced PLTL leaders, alike, is knowing how to approach students when the group is not functioning productively. This could mean that the students are not getting along with each other—perhaps the different personalities clash in such a way to create conflicts that prevent the students from learning effectively.

I found that most of the problems during PLTL sessions did not arise from conflicts between the students, but were because the group did not work through the problems using the problem-solving strategy correctly. The easiest solution to this is to simply start off the semester by explaining each strategy to the students, making sure that they understand the expectations. Even if you do this the students may still have trouble following the strategies because they may have forgotten the guidelines or prefer to complete the problems in their own way. So, what do you do when you find that the group cannot work through a scribe problem without the scribe speaking? Or what can you do when the groups work through a pair problem in silence despite your reminder that they should work together? How do you remind students of the rules without appearing too serious and strict?

For a scribe problem, an easy solution is to volunteer yourself as the scribe. This is a much gentler way to confront the students than telling them directly that they are not using the scribe technique correctly. When you are the scribe, and write only what the students tell you, it forces them to express their thoughts and explain each step clearly. If the problem was that the scribe participates even though he or she is supposed to remain silent, you can set an example by only speaking when asking for clarification and not participating in solving the problem. By working through a problem in this manner, you can remind students again of how a scribe problem works.

You may find that during a pair problem, students initial tendencies are to work in silence on their own. Although you constantly encourage and remind them to talk to their partner, the students may still revert to individual work. This can be frustrating, especially because you know they are not getting the same learning experience when they solve the problem by themselves. A good way confront the group about this problem is to first remind them again of

how the pairs strategy works. It might even be effective to review how this strategy works in the middle of the semester as a mini-refresher. Additionally, to further encourage interaction between students, you can tell them that they must discuss how they would like to approach and solve the problem for two minutes before any work is written down on paper. This prevents students from starting by working in silence. Also, I find that after their initial discussion, students usually seem more comfortable talking with their partner and naturally turn to each other to ask questions and discuss the steps they finish solving the problem.

Although you may sometimes need to be more firm and confront your students directly about problems that arise during PLTL, I find that confronting them in a more indirect manner helps maintain a friendlier atmosphere and is usually effective enough. Most of the time, students catch on to your subtle reminder and the problem is fixed without any major conflict.

Good luck, and enjoy the rest of the semester! I hope these tips are a helpful start to creating a more productive PLTL environment!

Building Your Quidditch Team **by Suchita Rastogi**

Now that you're the captain of your Quidditch team, your experiences in SAM lecture have probably led you to set some broad goals for your group. Above all, you want the students to get the best mental workout possible for their subject (chemistry, calculus, or physics), and you want them to do it as a team. After all, that is the highest goal of the PLTL Philosophy. But how can you achieve this goal? That is, how can you get six to eight students together and expect them to nurture each other through a problem set?

You already know the answer to that. You have to get your kids to talk as a group. The students must ask each other questions and give each other answers without your guidance. So, you as a leader have probably been prodding them to function more independently by deflecting your students' questions, ensuring the participation of the more quiet members, and asking questions that encourage higher order thinking. After all, that's what you've been told to do in your SAM lectures. But why were you told to do this?

That's where the second goal of the PLTL Philosophy comes in. You were told at the very beginning of SAM class that PLTL attempts to create a "community of scholars." Note the word *community*. This word implies that you aren't just facilitating a once-a-week study group for chemistry, calculus, or physics: You are building a community, or a team. You are trying to foster an environment in which each member is just as concerned for his/her team mates' understanding of the material as he/she is for his/her own understanding.

This was probably obvious to many of you, based on what you have been told by your professors and by the other essays in this book. But what might not be so obvious is what these methods actually do to create the team spirit in your group members. What actually gets the students to converse as a group independently, without you having to prod them? One motivating factor is the expectations that you set through your actions as a leader. But the more important factor is how your group mates feel about the team in which they are participating. In order to get the students to abide by the PLTL Philosophy, you first have to get them to care about each other. That's the secret behind building a great team dynamic.

All the goals of PLTL – getting your students to talk to each other, to look out for each member, and to answer each other's questions – depends on the team you cultivate. You can't expect your group to become an independent, collaborative, insightful team if its members don't

genuinely care about each other. You can only encourage this element of caring by starting with yourself and caring about each and every individual in your group. I'm not saying that you have to learn their life stories, or to get involved in their personal problems – you just have to see how each and every kid fits into your group, and you have to make them all feel welcome there.

The bottom line is that the team you cultivate is just as important as the knowledge you help students learn. When your students feel that they can back each other up as friends, they will be far more likely to back each other up when it comes to physics, calculus, or chemistry. Once they feel like they are a unit, it will be much easier for you to handle them. For instance, your students will be much more likely to listen to argument such as, “If you don't come prepared to sessions, you drag down the rest of the group.” In fact, the ideal of teamwork can guide your efforts in improving the group dynamic, mediating personality clashes, handling confrontation, and even ironing out attendance issues. If you remember to develop the team in your group, you can find a way to handle anything. This is why what we do isn't just called Peer-Led Learning – it's Peer Led *Team* Learning.

Why Group Confrontations aren't Always Dark Magic by Corwin Rhyan

The biggest fear of a leader, dissent among their students, can shake the foundation of even the most confident master. It can come in many forms: a student who refuses to participate, one who prevents his or her fellow classmates from learning, or even simply someone who doesn't come prepared for sessions. Although these problems at their onset may be minor, to be a successful leader, one must efficiently and effectively resolve the issue to prevent permanent damage to the group. However, the key to these sometimes stressful situations is to view them as an opportunity for your group to grow and learn together.

A key distinction that you must make as a leader is whether to handle a situation publicly, and as a group, or privately with an individual student. This decision must be based on the issue that needs to be solved and the after-effects that could affect other students. Overall, if an issue can be solved as a group it is best to do so with everyone present. The best example of this would be issues with students coming unprepared to sessions. If students come unprepared it is detrimental to the group because time is wasted catching up students and often problems are left unfinished. Regardless, if only a few students are not ready for PLTL, it is best to encourage the entire group to review lectures and notes and complete the professor's problem sets before arriving to sessions. Obviously, this doesn't put pressure on specific students, while encouraging the group as a whole to work harder on the subject.

Conversely there are situations where problems need to be handled individually. Usually, these cases result from more serious infractions and are going to be more difficult to handle. Examples could be a student who consistently disrupts the group during sessions or disobeys a rule of the PLTL guidelines. These problems need to be handled one on one with the student. To meet with a student individually, you should ask to see them directly after or before a session. You, as the leader of the group, should be firm and concise with the mistake the student has made. Be specific about the infraction and cite examples of the behavior, how it affected the group, and how it can be fixed. Finally, make sure the student leaves with positive goals for the group and understands the importance of the group's future.

Additionally, it is important to note that if serious problems result or if any situation you feel afraid or uncomfortable in approaching your group you should use the many resources around you. Firstly, other leaders may be able to help by offering suggestions or advice based on

their experiences. Also, use the PAM and SAM classes as chances to ask questions or share experiences with other leaders. Finally, use the professors of SAM and PAM as necessary through email or during classes. As a leader you should not hesitate to others to help make your sessions more successful and less stressful.

Most importantly however, is to remain positive during any confrontation you may encounter and treat it as a learning experience for you and your students. Use every encounter to improve your group's skills and cooperation with each other and gain confidence in yourself as a leader. Every time you confront your group on an issue, you will learn the skills that can be applied to future situations and problems.

**Finding your Inner Professor McGonagall
by Sammita Satyanarayan**

One of the greatest challenges of being a PLTL leader is knowing when and how to communicate with your group. A few sessions into the semester, you might find that the group isn't moving exactly in the direction you were trying to guide it. At this point, there are two options. One, ignore it and hope that it goes away. Two muster up the courage to say something about it. The latter option is the more arduous choice; however, problems with attendance, group dynamics, or individuals do not simply disappear with time, and the quicker they are taken care of, the more smoothly the semester will progress.

The first step in making an effort to broach a difficult topic is to use the most magical tool we have- email. The decision of when to use email or personal communication is in your hands. Email is a good way to send out a message to the entire group that is short and direct. If the problem is not too large of an issue, such as remembering to bring pencils to the session, then email is a perfect way to simply send out a reminder without having to personally approach the group. However, if the problem has to do with the way the group is carrying out a problem solving strategy, or an individual conflict between two or more people, it is probably wiser to use face-to-face communication.

Direct communication to individuals in your group is one of the most difficult obstacles in the PLTL leader's path. If it's a problem that you would like to address to the whole group, it is probably a good idea to do so at the beginning of the session rather than in the middle or at the end. Talking to the entire group about a certain issue at the beginning of the session will lend a more serious tone to whatever it is you wish to say. I would advise waiting until the entire group has settled down, and then to lightly bring up what it is you want to bring to their attention. It is wise to avoid sounding like a reprimanding teacher, but to rather take an approach of giving them a reminder of the expectations they agreed to follow by deciding to join PLTL. Remember, you as a leader are not forcing any of them to be there; they are there for their own benefit and it is up to them as a group to decide how well they use the time in PLTL to understand different methods of problem solving.

Finally, we come to the most challenging prospect of all- directly confronting one person. Not all groups will have members that cohesively work together, and there will be groups in which there might be one person who is causing problems for the entire group. In this case, it is

a good idea to first try sending an individualized email to this person and evaluate any change this might have caused in their behavior. If the individual is not letting people talk, is interrupting, or not being respectful, etc., the issue might be better served by making this person aware of their behavior during the session. If both of these tactics have not brought about an adequate change, then it is probably a good idea to talk to the student privately about the matter. Although the goal is to make sure that the individual causing problems stops their behavior, it is also important to note that this discussion does not need to be confrontational. As a leader and upperclassmen, your words will have more weight than you think they will. A quick chat on the way out from the session reminding them of the expectations during sessions will be equally as effective as having a very serious meeting outside PLTL. Of course, if the situation is grave enough that it demands that kind of a response, then by all means meet with the student as necessary. However for most situations, it is just a matter of making the individual aware of a certain problem that they might have not even been aware of.

PLTL is always a balancing act between a peer and a leader; however, you have to fully assume the role of the leader when it comes to confronting your group about problems that need to be fixed. As afraid as you might be that they will not like you for seeming strict or not being “cool,” they will probably respect you more in the end if you are a leader that can handle any problems which arise swiftly and tactfully.

If PLTL was a Pokémon Battle...
by Joe Shi

Yes that's right. You actually read the title correctly.

Of course, before we enter into battles, we need proper preparation. Anybody who's ever played a Pokémon game should know this. And if you haven't, you really should! They're all quite fun. As you've (hopefully) read through this book, you will have gained the necessary preparation for this battle. You've bought your potions and pokéballs (i.e., dry-erase markers and chalk), you've leveled up your team (i.e., improved group dynamics), and you've stepped back and allowed your Pokémon to take center stage (it should be obvious what that means at this point).

And now finally, after all your training, it's time for you to fight a Pokémon battle. If you haven't deduced it by now, when I say Pokémon battle, I'm actually talking about any issue that may arise within your group. One crucial fact about Pokémon battles (and group confrontations) is that they are "random encounters." You're just walking around in the tall grass outside of town and you're merrily on your way to the next city and then all of a sudden the screen goes "POW," and you're in a battle. Confronting your group is kind of like that; everything will be going okay and then all of a sudden you get into a situation where you have expletives running through your head and no idea what to do.

So what do you do? Well first, it's important to understand that just like how there are multiple types of Pokémon that you may randomly encounter; there are also multiple types of confrontations that may arise within the group. Some Pokémon, like Rattata, are extremely common. However, they're also not terribly difficult to defeat. In PLTL terms, a battle with Rattata would be those routine issues that arise that include: tardiness, boredom, hunger, and other simple things with simple solutions (i.e., bring snacks!). Of course, as you progress through your Pokémon/PLTL journey, you will meet rarer and stronger Pokémon. Sooner or later you might run into something like a Jigglypuff. These are cute distractions that ultimately make your group lethargic and unproductive (i.e., when one of your group members asks to go on a field trip to the DUC for free food). Eventually you may encounter a Gym Leader with an Onyx. These battles are often unavoidable (and inescapable like any Gym Battle), and the student is often very stubborn and adamant (just like Onyx's rocky attribute) about having their own way. If you're really (un)lucky, you might even find a Mewtwo. A battle with a Mewtwo

is always difficult. These students are incredibly bright, and not afraid to impose their ideas upon the rest of the group. Due to their amazing (academic) prowess, it's very hard for anyone to stand up to them. Therefore, you, as a leader, must find a way to get the student to be a team player.

There's one extremely important thing you need to keep in mind when confronting problems. In a Pokémon game, the ultimate goal is not to defeat the opponent Pokémon, but rather to capture it and make it part of your team. In a similar fashion, almost any confrontation with your group can be turned into a positive situation. While journeying to the DUC might be excessive, short deviations from academia often aid productivity because they give students a break and make PLTL more fun. Even though Mewtwo is ridiculously difficult to catch, he ends up becoming one of your strongest team members once you do manage to catch him. In the same way, if you're able to make your brilliant but dominant member a better team player, then your group as a whole will be improved and everyone will be able to benefit from his/her contributions.

One final PLTL-Pokémon analogy: have fun with PLTL. You wouldn't play Pokémon as a chore. Similarly, you shouldn't approach PLTL with a bored or annoyed mentality. Don't be discouraged by issues within your group; oftentimes problems that arise turn into hilarious stories and stalemates within the group ultimately push everyone forward. So go out and adventure into the realm of PLTL. Fight some gym leaders, catch some new Pokémon, and become the best PLTL leader that there ever was.