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Introduction

On behalf of the faculty involved in the PLTL program, I want to congratulate you on your selection as a peer leader. It is a high honor, and we have great confidence in your ability to take on the responsibilities of a peer leader. In a few days, you will begin leading a PLTL group. Most of you were part of a PLTL group as a student member. If so, you already have some ideas about what makes a PLTL group successful. Your peer leader probably made facilitating look easy. What you may not have seen as a member of a PLTL group were all the things that your peer leader was doing, in preparing and in facilitating the group during each session, that made him or her so effective. This book will give you a look “behind the scenes” by providing a wealth of suggestions and tips from last year’s peer leaders. The advice you find here will complement the instruction in peer leading that you will receive in your SAM and PAM courses.

Whether or not you have previously been a member of a PLTL group, you will have to make some adjustments to fit into your new role. As Scot Statman put it, “you are [not] . . . a group member, but a group *leader*.” Therefore, the members of your group will have different expectations of you than they will have of one another. However, you should not feel as if you are alone in this new role. You have a support network of PLTL instructors and experienced peer leaders who will be there to help you, especially during your first semester of leading.

Before you begin that first semester, remember that no one is perfect. We all make mistakes, and you will too. Forgive yourself before you start. You have an entire semester to learn the basics of peer leading.

The first step in the peer-leading journey is also the one that peer leaders typically find the most scary: the first PLTL session. You will find excellent tips on how to prepare for this step in “**Great Tips in Sailing or Failing: The Maiden Voyage of Your PLTL Group.**” For example, as Sumit Agawal points out, because participation by all members is crucial to the success of PLTL, it is important to set expectations for each group session and to create a comfortable environment. As noted by many past PLTL leaders, something as simple as providing food can help you create that environment.

Furthermore, it is essential to discuss the PLTL philosophy during the first session, which will help you educate your group members on what to expect, as well as to clarify the

distinctions between your role as a peer leader and the kind of help a tutor (or academic mentor) might provide. To give you just one example—the members of your group might be looking to you to provide an answer key, but as Oglia Luzmskaya learned to explain to her group, in PLTL no answer keys are provided because “a student cannot bring his or her PLTL leader to the exam.”

Groups cannot function without an atmosphere of respect. Owen David says it well: “mutual respect leads to better discussions, greater cooperation, and a more cohesive and beneficial learning environment overall.” How to develop respect within a group is described in the second section, “**Respect: It’s Not just a Motown Classic.**” In the first PLTL session, the group should develop ground rules, and Kris Chenard stresses that these ground rules should contain a rule about respect for the group and the group leader. Peter Jin points out that your group will contain students at different skill levels and that this diversity is in fact part of the success of PLTL; however, as the peer leader you must show your group how to recognize and respect the contribution that each member of the group is making.

Carly Berg aptly describes a PLTL group as a collection of individuals who develop into a cohesive, functioning, academic-investigation team. But, how will you get all of those personalities to work together toward common goals? Last year’s SAM class gives you a great start on building a cohesive group in the third section, “**Integrating Different Personalities.**” Chris Schipper, for instance, suggests that you can expect your PLTL students to be one of four distinct types: a “ringer,” a “rider,” a “struggler,” or a “lockbox.” Ronnie Slipman encourages you to take advantage of your group members’ differing personalities, which can help you develop your group in a way that will benefit each individual member.

As Amy Fletcher and Fidel Desir note, preparation for PLTL sessions is another key to success; they both correctly point out that you must prepare not just the content, but also probing questions to ask and the group dynamics. However, it is impossible to prepare for everything, and unexpected problems are bound to occur. The fourth section gives you guidance on what to do in such situations, with “**Recipes for Disaster.**” Greg Booth offers sage advice when he says that patience is essential and that, no matter what, you should not act or speak condescendingly to a group member. Wise words for all of us

come from Chris Chesley: “At some point during the semester, something will happen during a PLTL session that you may not have been prepared for; don’t panic, be flexible.”

As we will discuss throughout your training, PLTL groups develop over time, but do not always follow a linear progression in their development. Thus, your group may seem to take a crucial step forward in their collaborative skills during one week, then take two steps back the next. Getting students to move forward together can be difficult work. What do you do when you try your best, follow the advice given to you, but do not see the progress you expect? You will find suggestions for responding to such situations in **“Trumping the Stumping: Dealing with Difficult Dilemmas.”** As Frank Bruno tells us: “dilemmas occur that do not reflect an inability as a peer leader, but [instead] occur randomly within your group.” We instructors tell new peer leaders that the students are typically very well behaved on the first session, but as Anupam Kumar warns, you have to be aware that as a PLTL group evolves, “students stop being nice and start getting real.” However, Jessica Lewis urges you to “never give up on your group.”

Remember that you are joining a support network—a community of PAM and SAM instructors and peer leaders (both new and experienced) from multiple disciplines. In this community, we depend upon and learn from one another. You are not competing with your fellow peer leaders and the larger PLTL community, but rather working together toward a common goal. Peer leading is a wonderful journey that is different each and every semester. I look forward to going on that journey with you.

Regards,

R. Frey

The Importance of Expectations and Comfort at Your First Session

by Sumit Agarwal

Not considering the content covered in each individual PLTL session, the first session is, without a doubt, the most important session of the semester. Two concepts stand out regarding the first session. First, *setting expectations* in the first session is extremely important in order to avoid misunderstands and disappointments in future sessions. Second, the concept of *comfort* is extremely important in all of your PLTL sessions, but things can be done in the first session to promote comfort early on.

Expectations

All of your students will have their own expectations. These expectations could be about the group, themselves, or even you. More importantly, these expectations can exist before they even come to their first session. For example, when they signed up for PLTL, many may have expected PLTL sessions to be tutoring sessions; after sitting through the first session, they may believe you are incompetent because, instead of answering questions, you regularly dodge them by using questions to answer their questions.

Thankfully, these initial expectations are loose, and thus easy to change *at the beginning of the first session*. Here is some advice regarding realignment of expectations:

- **Expectations of PLTL.** Be clear about the philosophy of PLTL, including your role as a PLTL leader. Let them know that they will need to work together to answer the given problems, and that you are not a tutor, answer key, or PhD in Chemistry but instead a guide.
- **Expectations of you.** Even though you are not a PhD in Chemistry, they will still need to have a good first impression of you as a knowledgeable student of chemistry. I recommend reviewing the PLTL problems and their associated topics thoroughly before the first session.

Comfort

In addition to expectations, comfort will be extremely important in order to promote active participation. Here are small things you can do at your first session to establish comfort:

- **Small talk.** Sometimes, small talk before the session and at the beginning of the session can break the ice better than an icebreaker. Choose the method that works for you. Don't just do an icebreaker for the sake of doing an icebreaker though. For small

talk, General Chemistry can make a great conversation starter to unify the group because it is common among all the students.

- **Group rules.** Though seemingly unnecessary, group rules can be quite valuable. The rules should touch upon expectations of each other like respect and attendance.
- **Names.** Using names can bring sessions to a more personal level. Have your students make and use name-cards for the first couple sessions.
- **Comfort starts at the leader.** The leader should be (or at least appear to be) comfortable before the entire group is comfortable. Try familiarizing yourself with the room in which the session will take place before the session actually takes place.
- **Agenda.** Lastly, some students appreciate an agenda so they know what to expect. Uncertainty can lead to an easily avoidable loss of comfort.

That's all I have. Good luck at your first session!

How to Prepare for Your First Session

by Susan Garverick

So you are getting ready for your first session and you might be feeling a little nervous, I certainly was. What worried me the most was the nagging feeling that I was going to forget something. I hope that this following checklist will prove useful.

1. Print out an attendance list from the Cornerstone website
2. Make sure to pack your PAM notes
3. Problem sets!!!

It would be pretty hard to run your PLTL session without the problems :)

4. White board markers and some sort of eraser (a napkin would work)

Some rooms are constantly losing their markers and erasers

5. Supplies for name tags

Not only can you learn their names, but they can start building a group relationship by learning each others' names as well

6. Ideas for ice breakers and any supplies if needed: I will give an idea below.

7. Candy or baked goods

I tend to favor baked goods, especially if you live off campus and have a kitchen at your disposal. Food can really bring your group together and help break the ice.

8. ENERGY!

One of the most important things you can bring to your PLTL group is enthusiasm and energy to keep the group moving when they are stuck and to encourage participation from your members.

It is always good to start out with an icebreaker or two to get your members to participate. My favorite icebreaker for PLTL is two truths and a lie. You tell everyone to think of three facts about themselves- two of them true and one of them a lie. Then you go around the table and each person gives their name followed by their three facts. Then the rest of the group has to try to guess which fact is a lie. It works well for PLTL because you get to learn some interesting facts about each other and it starts to promote teamwork and communication when trying to guess the lie.

Just remember to be prepared, show up early to make sure your room is ready, and have fun.

P.S. These are delicious and easy to make cookies for your PLTL group.

Recipe for Nestle Toll House Chocolate Chip Cookies

Ingredients:

2 1/4 cups flour 1 teaspoon baking soda 1 teaspoon salt

1 cup (2 sticks) butter, softened 3/4 cup sugar

3/4 cup packed brown sugar 1 teaspoon vanilla extract

2 large eggs 2 cups of chocolate chips

Directions:

1. Preheat oven to 375
2. Combine flour, baking soda, and salt in small bowl.
3. Beat butter, sugar, brown sugar, and vanilla extract in a large mixer bowl until creamy.
4. Add eggs, one at a time, beating well after each addition.
5. Gradually beat in flour mixture and chocolate chips.
6. Drop onto ungreased cookie sheets.
7. Bake for 20 - 25 minutes.
8. Take to PLTL and enjoy!

Breaking That Ice
by Sudesna Lakshman

Your very first PLTL session as a leader...you're probably excited but chances are you're a bit nervous as well—what should you do? What should you say? What if you've forgotten everything you know about <insert subject here>? Relax. You were chosen to be a PLTL leader because people believe that you can do it. A little review of the subject material should help clear out those summer cobwebs. As for leading the session...well, you might find some of these tips helpful.

Hopefully by now you've emailed your group, introducing yourself and letting them know the meeting place and time. Check your email frequently in the days (and hours) leading up to your first session, so that you'll know ahead of time if someone will be absent or is unsure of how to get to the assigned meeting place. Get there early to situate yourself and chat with students who show up ahead of time. This creates a friendly atmosphere in which everyone can feel more at ease.

Make sure you show up prepared. Check out the room ahead of time to make sure the room is unlocked (you'd be surprised), that it's not too hot or too cold and that there are enough chairs. It might not be a bad idea to invest in your own set of dry erase markers because they have a strange way of disappearing from rooms. You'll probably want to bring the problem sets (with worked-out solutions), something to write with, a textbook for reference (in case the students don't), a calculator (if applicable) and of course, attendance sheets!

Do an icebreaker. Your students might grumble that they've done so many icebreakers in the past few days but one more really won't kill them. You could have them make nametags for the first day. It's essential that they know each other's names if they are to become comfortable working together. They also respond well to being called by their names so make sure you're familiar with their names ahead of time so during the icebreaker, you can match a name to a face.

On a more lighthearted note, bring food! If you're a baking whiz, whip up a batch of brownies and your group will probably love you forever. But even if you're not handy in the kitchen, you can still make a good first impression on your group by bringing them snacks from Bear Mart (most of us have too many meal points anyway). The point is, snacks help break the ice because they are fun and provide a conversational point.

Set the rules from the very beginning. You may want to scribe at the board while the students dictate the rules. Prompt them with essentials such as showing up on time, coming prepared and being respectful of others. By allowing the students to establish their own rules, they'll have an investment in the group and it helps set an orderly tone for the rest of the semester. Your group may find it helpful to see an agenda on the board. After introducing yourself, go over the PLTL philosophy. Some students may have heard it before but for others, it will be a new concept that may be hard to grasp. Stress that you are not a teacher or tutor and you are not there to give answers, only to provide guidance and facilitate their problem-solving as a group. That said, you want to see them do well and you'll try to make sure their questions do not go unanswered (this gives you the flexibility to deflect their questions to the group or redirect them to the textbook).

The last thing left is to dive into the problem set and have fun! If your students see that you are excited to be there, they'll catch on. The first session is important but if it doesn't go as you'd hoped, remember to put things in perspective. You have the rest of the semester to polish your PLTL skills!

Ahoy, Matey!
by Olga Lozovskaya

Consider yourself the captain of giant pirate ship setting sail on the dangerous waters that are PLTL. There are certain preparations you must make in advance, before getting on board. First of all, you must chart your course ahead of time; visit the room where you will be meeting, and e-mail your group about its location in the building (e.g. all the way to the right side) to avoid any tardiness when the big day comes. Additionally, you must pack adequate provisions so that your crew does not die of hunger—simply put, bring snacks. Sugar keeps energy levels higher, and breaks awkward first-day tension. Also, I found that bringing paper and markers for the students to make their own nametags was helpful during the session.

Plan on getting to your meeting early, to write your contact information up on the board, and to greet the students as they filter in. Begin with a brief introduction about yourself, and move on to PLTL policies. This is the most crucial moment of your first session. You should not present yourself as purely a dictator, nor as purely a friend. You must be firm and reasonable with the rules you set about absences, tardiness, and behavior during the PLTL sessions. For example, students must e-mail you two days beforehand for an excused absence, or they walk the plank. If you are not comfortable being the ‘bad guy’ at all, tell the students that the PLTL program as a whole sets strict rules, and you are forced to adhere to them whether you like the rules or not.

Additionally, you must emphasize that you are not a tutor, nor a teaching assistant. This seems to be a difficult concept for the students to grasp—you will find in the beginning that they will often ask you if their solution is right or wrong. You have to be clear from the get-go that you will not tell them, and that telling them would be useless since they obviously aren’t allowed to bring their PLTL leader to an exam, anyways.

Some PLTL leaders swear by name games, but if you’re against the idea, no worries: I found casual introductions about name, dorm, home-town to be an effective way for the students to begin getting to know each other. It allows students to strike up brief conversations about friends they have in common, or the fire alarm that went off last week, etc. Once you feel they’ve had enough socializing, it is time to get down to work. Volunteering to go up to the board is a scarce occurrence in the first few PLTL sessions, so your best bet is probably to pick somebody yourself. Tell whoever is going up to the board that they can ask the group for help—this is, after

all, team learning. Do your best at encouraging the students to talk about the problem they are solving. Your job is to facilitate discussion among virtual strangers, and if you do your job well in the beginning, you'll find yourself having to do less work as the semester goes on. Good luck!

The First Session: Getting off on the Right Foot

by Scott Statman

As I learned last year, the first PLTL session is by far the most important one of the semester. This is because on the first day you establish yourself as the leader of the group, and in doing so, set the tone for future sessions. In my experience, the best way to do this is to make a little speech at the beginning of your first session, before even handing out the first problem set. As all PLTL leaders do on the first day, you will start this by handing out the PLTL philosophy to every member of your group for them to read before you even say anything. After this, you should engage the group in a discussion of the PLTL philosophy, and then explain to them how you will run your group (draw from your experiences as a member of your own PLTL group). I think that this is the most important part of the first session, because your group cannot run smoothly if the members do not understand the purpose of PLTL.

After handing out the PLTL philosophy for everyone to read, but before you discuss it, you should introduce yourself to the group and then have them participate in a little icebreaker. A good way to combine introductions with an icebreaker is to play two truths and a lie. In this icebreaker, everyone introduces themselves, and then tells the group three things about themselves, one of which is false. The group then works together to figure out which of the three statements is a lie. Although it seems corny, the purpose of doing an icebreaker in your first session is to begin to foster that sense of group unity and cooperation that is so important in creating a successful PLTL group dynamic. As you will see, if you start out on the right foot by doing these things, everything will slowly fall into place, and after each session you will see your group dynamic get better and better.

Another way to ensure that this happens is to bring candy for your group members at the beginning of your first session (and subsequent sessions). Although it seems funny and unnecessary, it is important for two reasons. First, giving your group members candy will make them just a little bit more enthusiastic to do chemistry problems on a Sunday afternoon, when they would rather be sleeping or watching football. Second, bringing candy gives you the opportunity to set aside ten minutes at the beginning of the session for your group to eat and make small talk with you or with each other. I think this is the most important part of fostering a successful group dynamic for your future PLTL sessions, because if your group members can

begin to make friends with each other and feel comfortable with you, they will work together much better when solving PLTL problems.

My final piece of advice to you is that you walk into your first PLTL session with a sense of confidence, and that you remember that you are no longer a group member, but instead a group leader. If you establish yourself as a leader on the first day, every session from that point on will be sure to run smoothly.

How to Have a Successful First Session

by Shayna Weiner

The first day of PLTL can be a little nerve-racking, but here are a few suggestions to help the first session go smoothly. There are a few things that you can do beforehand to make sure you are prepared. First, send an email to all of the students in your group reminding them the time and place of the session. Also include how they can reach you if they have any questions or are going to miss PLTL. This is also a chance for you to tell them what you expect them to bring with on the day of and what they should be doing to prepare, like going to class and doing the problem set.

Another thing that will help you prepare is to write out an outline of what you want to get done during the first session. The outline may include doing an icebreaker, going over the philosophy of PLTL, discussing rules, going over equations, and doing the problem set. Reviewing your notes and the problem set before PLTL is also a very important part of preparing. You should be sure that you understand the material being covered on the problem set and how to do all of the problems. My final suggestion for before PLTL is to buy candy or snacks for the group. This is a great way to help make everyone more comfortable on the first day. Candy is an easy thing to start talking about and to take the focus off of the fact that no one knows each other.

On the day of the first session you should arrive early to make sure that you get there before your students. This also gives you a chance to make sure that you have everything that you need, marker and eraser, enough chairs, etc. You should arrange the table and chairs the way that you want them and write the outline on the board so that when the students arrive they know what to expect. You should also write your name and contact information on the board so that everyone can write it down correctly.

I strongly suggest doing some sort of icebreaker at the beginning of the session to help everyone get to know and become comfortable with each other. If you don't want to do an icebreaker, at least spend some time just chatting. My first day I had the group play Two Truths and a Lie. I like this game because it is a little more interesting and fun and it doesn't drag on forever. The important thing is just to get everyone talking and get the group to form a comfortable environment.

Rules may be the most annoying part of the first session, but it is still important to go over them before starting the semester. One idea is to have the students come up with their own rules so that later in the semester they will be more likely to stick to them. Some ideas of topics to cover are starting time for PLTL, preparation, how to treat other group members, and confidentiality.

One last reminder before the first day: you don't have to know everything. You aren't a teacher; you're a PEER leader, so it's okay if you don't always have the answer or if you aren't perfect.

That Special First Time

by Jack Zhou

Everyone wants their first time to be special. Get your mind out of the gutter, I'm talking about leading your first PLTL meeting. If you're like me and have never been in a PLTL group before, then you're probably feeling very anxious and worried about what to do. The questions "what are my students going to be like," "will they work well together," "what do I say to them," are probably all running through your head right now. But don't worry, I'm here to help you get through your first meeting without a hitch. Well, unless you're reading this an hour before your essay for SAM is due, in which case this advice comes too late. I hope you didn't mess up too badly.

For those of you good students who are reading this before your first PLTL meeting, here's what you do. First: bring food. I know everyone has already suggested this to you a hundred times, but this is not merely a suggestion. Food is a great icebreaker, one that isn't forced, or cheesy, or weird, and it acts as a good icebreaker until it's all gone. Your students are getting more comfortable with each other without you doing anything. However, unless you want to buy them food every week, don't make this a regular thing. They will start to depend on you, and will begin to feast upon your meal points like a hungry animal. Instead, get other students to volunteer to bring food, or randomly pick only certain days to bring food.

Make sure you arrive early to the room to make sure the table and chairs are set up right, make sure you have markers, etc. Even more important, however, is making sure your students arrive on time. Send them the email telling them where and when PLTL is taking place ahead of time, because sometimes people don't check their mail very often. When they arrive, greet each of them, but make sure everyone is there before making any introductions. After you introduce yourself, have everyone else introduce themselves as well. Their introductions could include their major, their hometown, and their residence, for example. Chances are, most of your students will be freshman, so an excellent chit chat topic to start off with would be asking them how they feel about college, this school, their classes, and etc. If you want, you can also do some sort of icebreaker activity with your students. I'm sure the other essays in this section will have suggestions for great icebreakers.

After everyone gets to know each other a little, introduce the concept of PLTL to them. This is where you have to emphasize that you will not be giving them any answers to the

problems. It's important to establish this early on so you can be consistent. Also, make sure to set some basic rules regarding respect and coming on time.

When you finally get to the problems, make sure you are consistent about enforcing the rules, making sure the students follow the recommendations for how to solve the problems, and not giving up any answers. Hopefully, you will have a great start to the semester.

Getting Along from the Get-Go: Respect and the Importance of Ground Rules
by Kris Chenard

As a rookie PLTL leader, I put a lot of effort into micromanagement of group dynamics, mixing and matching personalities and learning styles, and working hard to maximize my groups' success. After several sessions, these adjustments to my pairs and small groups became less important; the students respected one another, listened to one another, and were confident enough to voice their own opinions. The importance of respect and trust in the group environment became evident as the students began to work together without my constant exhortations to do so.

How can a leader help create an atmosphere of trust and respect within the PLTL setting? Setting a few simple ground rules is a great way to start. During the first or second session, it is important to set some rules that establish the importance of respect for the rest of the group, and respect for you, the leader. Some good basic rules should keep the group on track and establish your authority. A good first rule is to forbid interrupting one another, as the more outspoken students have a tendency to dominate the group in the early sessions. When students can speak without worrying about being interrupted, many of the more reserved students will feel more comfortable about voicing their opinions. Decide on a few simple rules, as many students will feel overwhelmed and perhaps threatened if you make too many rules. Also, don't be afraid to ask your group members to suggest rules, as this allows them to give you their own input and demonstrates your own trust for the group members.

Once the rules are set, it is important that you gently enforce these rules and follow them yourself. Politely remind students who stray from the rules, and they will respond to your suggestions. By no means should you use the rules to harass and bludgeon your group, especially since the rules you set may not apply in all situations; rather use them to make sure that everyone is participating and allowing others to participate.

Also, it is very important to remember that if you respect the students in your group, they will respect you. When students ask questions, resist the urge to cut them off in the middle of their inquiry and provide an answer that you assume they are looking for. One must make sure to listen carefully and allow the students to fully voice their

concerns, or else you may miss an important concept or make students afraid to ask further questions.

Soon enough, the students will begin to trust you and one another as they work through several problem sets. By this time, the students probably will not need any kind of rules or guidance any more, as they will have grown to rely on their own talents and the talents of their fellow group members. They will begin to look to one another for answers before asking you, and that is a great group accomplishment!

Respect: How I Learned to Stop Worrying and Love PLTL
by Owen Davis

It should be obvious to any peer leader that respect is important in a PLTL group. This might seem like another piece of advice that anyone could think of, such as, “You should be nice to your students,” or, “Don’t ever call a student a moron.” However, respect comes in many levels in a PLTL group – some obvious, some less so, and it does not just involve you respecting your students, but the students respecting each other also.

The first way to ensure respect between you and your students is to know and clearly explain your position as a peer leader. What irks me a lot is when PLTL leaders refer to their students as their “kids.” Your position is at eye-level with your students; your responsibilities include managing the PLTL session and leading the discussions, but at an institutional level, you are the same as the students – an undergrad. Some will be freshmen, but others still may be your age or older. Know that they are indeed your “students,” but to call them your “kids” implies that they are substantially younger or far less educated than you are, and neither of these is the case. You should treat them as you would expect to be treated by a peer. I got to know my students pretty well my first semester, and while I wouldn’t say that we were all best friends or anything, we were certainly on a casual basis, and I never really felt like or saw myself as a “teacher.”

Of course, that door swings both ways. For your students to respect you as a peer leader and instructor, you need to let them know that there’s a reason you lead the group, and clearly lay out the expectations you have with your group. This is not to say that you need a clear set of rules or anything nearly as formal and “class”-like, but at the very least, the students should have a respect for your methods and your knowledge of the subject, and know that you are both a peer and leader.

It is not difficult to maintain respect between yourself and your students since friendliness is generally mutual. However, it is more difficult to maintain respect between your students. Issues here are more subtle and harder to recognize than if a student disrespects you. Sometimes it is not obvious that there are problems between students because your attention is spread out. There are a few warning signs to look for in specific cases, however.

First, it is apparent when one student thinks he/she is the “best” student in the group. There will be noticeable differences in the strengths of the individual students, but there is never a reason for preferential treatment towards any student, and neither is there reason to allow one student to act in a way that is disrespectful towards other students simply because he/she thinks they are more adept. Sessions can slow down and falter when one student takes control; worse still, less discussion goes on so everyone suffers. If the “know-it-all” student gets to be a major problem, you can take them aside after class and let them know the situation, and the respect you expect.

Conversely, the student who has the most trouble in the class can be singled out. Signs of disrespect towards this student could be sighs during the questions he/she asks, or being interrupted by other students. It is difficult to deal with this scenario, since you don't want to say, “Hey everyone: I know James is a bit slow, but you're just going to have to *deal* with him.” Luckily, there are subtler ways of dealing with the situation, such as saying, “Hey, let's hear what James has to say,” or reminding the class that everyone is in PLTL to learn together, regardless of their skill level.

If you respect your students, your students respect you, and all the students respect each other, your group will run smoothly. It's not difficult to act with respect; the old axiom, “Do unto others...” is habit for almost everyone. Cultivating this respect into friendship and cooperation is what drives PLTL, though, and your ability to use this mutual respect leads to better discussions, greater cooperation and a more cohesive and beneficial learning environment overall.

The Balance between Friendly and Professional
by Aaron Hecht

Finding a balance with your group between an informal atmosphere and a formal environment hinges on the amount of respect the students have for you as a leader and the amount of respect the students have for each other. Although this may seem obvious, it is not always an easy task setting up such an environment with your PLTL group. However, there are several things you can do as a leader to control the group dynamic so that the students are respectful.

One thing which worked well for my group to help set up a respectful environment was to have the group set up their own rules during the first few sessions. Encourage them by adding a few rules yourself, to ensure that the students include ideas that will create a group who will move through the problems creatively, unafraid of making mistakes. Depending on the group, you may have one or more people who feel the need to prove themselves by pointing out where others make mistakes in a not-so-kind manner. As a leader, to squelch this potential problem early, make sure your group understands that PLTL is a safe-learning environment and that making mistakes is part of the process. A good way to make sure this happens is by having everyone agree to be courteous to the rest of the group and then hold them to this agreement over the course of the semester.

In addition, in order create an environment in which the students respect each other, it is imperative that you allow everyone in the group to participate equally. This may seem to be an easy task in the first few weeks when the students are still excited to meet new people and are eager to have everyone involved in group problem solving. However, over time, various members of the group will fall into certain patterns of participation, some of whom will jump on problems immediately and others who will wait some time before they interject their ideas. As a leader, it will behoove you to quiet the dominant members of your group and push the soft-spoken members to participate equally. Besides the fact that equal participation will give the students equal opportunity to learn in the group, it will also allow other students in the group to recognize each other's strengths and talents. This will give the students further reason to respect each

other and each person's unique abilities. If you find that only a few people consistently participate, the group dynamic may not be as respectful as you would like.

The last aspect of respect that is important in the group is the students' respect for you as the leader. The relationship of the group and the leader is an interesting one. On one hand, they think may think of you as more of a teacher figure, guiding them through material with which they are not yet comfortable. On the other hand, they will also think of you as just another student one or two years older than them. Depending on which category each student places you; their levels of respect for you will vary. Most students are very appreciative and courteous towards their leaders. You may be tempted to prove yourself as a leader early in the year through your management style or by teaching concepts they do not understand immediately. While teaching the students how to do certain problems may increase their respect level for you in the short-run, the long-term benefits of allowing the students to work it out on their own far outweighs the former decision. Over the course of the year, the students will respect you because you were a guide, not a teacher.

The best advice I have is this: the students will respect you most as a leader if you come prepared for the session each week with an enthusiasm for the material and a vested interest in how the students perform in the class. If you show consistent effort and interest in PLTL, so will the students. This will allow the group environment to be as pleasant and productive as possible.

Respect and Academic Ability

by Peter Jin

In your group, you will have two types of students: the student who is knowledgeable on the material and the student who is not. There are many reasons for this disparity. Some students may not go to lecture. Some students have learned the course material in high school. Some students are, dare I say, simply “smarter.” The level of ability in your PLTL group will not be equal all around. This variation is a part of what makes PLTL groups successful, but it can also lead to many problems.

Let's generalize. The stronger student often contributes a lot, rarely struggles to complete a problem and is often one that leads the group. The weaker student often is frustrated at his or her lack of ability, asks a lot of questions, and is shy to lead and more willing to simply follow. Now, let's see potential problems that can arise from both perspectives.

The stronger student is often seen as the source of these disrespect issues, but he's not completely wrong in his complaints. The stronger student will often believe that he is held back by the rest of the group. The stronger student often feels he could get a lot more out of PLTL if the other students at least had a more basic understanding of the subject.

The weaker student, however, is not simply a victim. There is a strange association with students who don't go to lecture and students who struggle with PLTL problems. These students are often unprepared and treat PLTL more like a recitation than an opportunity to gain a deeper understanding of the course material. Sometimes, however, they do go to lecture and do the homework but still just “don't get it.” The weaker students often feel inferior.

As the semester progresses, the disparity between these two types of people will only become wider and wider. With these growing disparities, the stronger students will become more frustrated and the weaker students will feel even more inferior. This issue shakes the foundation for PLTL, where people of all different backgrounds come and learn from each other. Not only is PLTL less than comfortable, but it becomes a place where the weaker students rely on the stronger students to learn instead of all students making a collaborative effort to understand the course material.

So what can be done? You can tell your students to do the problem sets, go to lecture, and to be nice, but this only goes so far. To be honest, there is no way you can ever eliminate this stronger-weaker variation in your group. The best way to avoid the problems it creates, however, is to simply ignore the variation. This does not mean to ignore the problem as it should always be in the back of your mind. Many of these problems are situational and do not have a clear-cut solution. One general rule is to treat every student as equals. Call on all students equally, pair students up with each other randomly, direct tough questions at everyone. Do not play off these disparities, especially in group-work. A good example is pairs: it is extremely tempting to just pair a weaker student with a stronger student, but everyone here is an adult and will pick up on what you are doing, thus furthering the disparity.

Furthermore, always place emphasis on the PLTL philosophy that students all have something to learn from each other and that the students should come away from the session not only learning about the course but also different ways to think and approach the course material. This will not only make the weaker students feel more confident, but also get the stronger students to be less condescending and perhaps listen to others more carefully. Remember, creating a comfortable environment for your group is key, and comfort starts with members of the group feeling like they all have something to contribute and to learn from each session.

The Up, Down, and Sideways of Respect
by Jerome M Molleston

Respect is one of the most important parts of a PLTL group. It breeds trust, promotes listening, and creates communication. Without the leader's respect for the students, he or she won't listen to the answers that the students give to problems. Without the students' respect for the leader, they won't respect the leader's guidance. And without respect for the other students, the members of the group won't allow thoughts to flow between them. Therefore, respect has three components, which I will call the up, down, and sideways of respect; that is, the respect of the students for the leader, respect of the leader for the students, and most importantly, the respect of the students for each other.

As a leader, you must be respected by the students. If they don't perceive you as someone who knows your topic, they won't obey your guidance. You lead the group, and even though you don't give the group members the answers, you do show them the path on which they must walk to get there. They won't follow that path if they don't respect you, just as you wouldn't trust a skinny cook. You must show knowledge of your topic through elaboration on topics that seem incomplete or through the answers you give to students' questions. I've seen many leaders who, technically following the PLTL philosophy, simply give an "I don't know" answer to any question. My view of these leaders has always been decidedly negative; don't give away everything, but both for the sake of the students' knowledge and for their respect for you, make sure they know that you know what you're talking about.

It is also very important to respect your students. We keep dogs on leashes. Why? Because we don't respect them enough to let them guide themselves properly. Students, and most importantly, PLTL students, are intended to be self-sufficient in many ways, and are supposed to be the means for their own success. Always remember that they are taking the class, and have, at least in theory, learned the ideas behind the topic for that week, and they may even know more than you on some things, since it's fresher in their minds. If you don't respect them, you won't truly let them be their own motivators, and you'll be too dominating in the group. In addition, students can sense it when someone doesn't really listen or respect them, and they'll fear to mention ideas to you, since they

know you aren't really paying attention to them. It's a vicious cycle: if you don't respect them, they won't respect you, and on and on into oblivion.

Finally, and most importantly, you must encourage group members to respect each other. Don't ridicule them or point out flaws, don't make anyone feel stupid, and remember to acknowledge all of the students' contributions to a solution. If you mention each student that contributed (i.e. "Great, Bob, you got part A, which let Sophia tackle part B, so we have our answer!"), they will remember the contributions of others as much as themselves, and maybe next time, they'll turn to the math whiz with help on math, the visual thinker for diagrams, and the error-checker when their numbers disagree, respecting each other for their contributions to the problem. Also remember to prevent any one person from dominating; domination, and permitting it, shows lack of respect for the rest of the group and breeds resentment, and thus a lack of respect, both for that person and you.

By now, you hopefully see why the three components of respect, the up, the down, and the sideways, are all integral to the proper functioning of a PLTL group. I'm sure you already knew in a general sense that respect is good, but within a PLTL group, the dynamics of it change, and more specific types of respect are necessary. Now that you know what types of respect you need, I'm sure I've permanently changed your life for the better. Or at least given you some fodder for this week's response paper...

Polite Policing
by Keith Morse

The rules to live by in building and maintaining respect within your group are, obviously enough, no different from those rules that builds respect within any group of people. The only difference with PLTL is that, as the leader, there is more responsibility on you to set the tone. I have no interest in writing about, and I'm sure you are equally opposed to reading about, my general opinions about how you treat somebody with respect, so I will spare us both. However, there are certain situations that arise in PLTL that may you may not regularly encounter in the outside world, and for these my one semester of experience has given me pearls of wisdom worth sharing with you, so here it goes:

The Think-They-Know-It-All-But-Are-Usually-Wrong Students: You may have a student who is vocal and pushy about his vastly incorrect solution to the problem. He's so pushy, that you get a little frustrated with how he's dominating the airwaves and preventing others from contributing. As a new leader in a seat of relative power, you may have the urge to quickly solve the problem by unequivocally telling him that he is in fact wrong and should consider other approaches. Aside from going against the PLTL learning philosophy, this urge should be suppressed because of the belittling effect it has on the student and the negative impact it will have on other students' willingness to contribute. As a leader, you have the benefit of knowing all the answers to the problem sets and the students look to you as the mathematical authority. But using this knowledge to silence an overly vocal student is an abuse of that authority and also a crummy way to lead PLTL. During the semester in SAM and in practice, you will learn numerous more appropriate ways to deal with this type of student, so use those instead of capitalizing on the student's mistakes.

Keeping Peace Between Those Who Know It and Those Who Don't: You may have a situation in your group where one or some students put the effort into preparing for class and have no trouble answering problems. These students contrast those at the opposite end of the spectrum who haven't been to class in weeks and are hoping that PLTL will keep their heads above an F. These two groups, clearly enough, contribute differently and expect different things from PLTL. The challenge for the leader is balancing the

frustrations that can arise because of these differences. Those who are prepared get exasperated with those who are unprepared, while the unprepared get angry at the know-it-alls who always lead the problem solving. You as a leader may also get frustrated at one of the groups if it seems to be dominating the tone of the group too much. When leading in this type of situation you need to remember that people use PLTL for different things, and you need to respect them all. A good way to do this is to always rotate who leads the problem solving, and subtly ignore certain students if they've already participated enough. The most important thing is that you don't take sides and unjustly decide what *all* students should get out of PLTL.

Respect: Protect Ya Neck (13th Chamber)
by Thomas Stevens

There has been no modern work more influential than Enter the Wu-Tang (36 Chambers). The reverberations of its inestimable and profound sapience have been felt around the world, most notably at Washington University. In all sincerity, is it any coincidence that we have WU-STS, WUPD, or now (most conspicuously) WU-Tan? It seems logical, then, that one could apply some facet of the impalpable Killa Beez' wisdom to Peer-Led Team Learning. To ensure that your group maintains an air of respect, look to the enduring words of Inspectah Deck, who intones on the Wu's first single, "Protect Ya Neck."

Throughout the course of the semester, your group members will become more comfortable interacting with one another, which is generally very constructive for PLTL. Nevertheless, it is possible that this newfound comfort and camaraderie may morph into apathy or even insubordination. From these seeds of discontent, the heinous venus flytrap of bad vibes and inefficiency can sprout its unruly brow from the soil of your session and devour the environment that you have toiled to harrow all semester. To avert this collapse, it is of the utmost importance that you protect ya neck. The level of respect among the group members is a reflection of the respect that they show to you as the leader. If your group succeeds in belittling you or ignoring you, it will prove much more difficult to direct them during the sessions. Moreover, there will be no barrier to the team acting the same way toward each other. While it may seem difficult for those more introverted, standing up for yourself in the face of impertinence is absolutely critical to preventing the decay of the standard of respect the group should hold.

I am saying all of this from the standpoint of someone who did not heed the sage advice of Inspectah Deck. In truth, by the end of the term there were a few individuals in my group that paid me no mind. I now recognize that this was a direct consequence of my refusal to address the problem as it ballooned in my face throughout the sessions. There were some key warning signs of diminishing respect which gradually appeared in my group. First and most benign of these was when the group members stopped concentrating on the PLTL problem set and fixated themselves on getting answers to the course homework. While initially I did not stop them from conversing with each other about this during the session, it soon became problematic to bring the focus back to the given set. Because I was lax in

detering this discussion, some students eventually came to the meetings only to receive help on completing the homework and not to learn the concepts.

Stemming from this problem is the case when the students talk among each other while the leader or another student is talking, unrelated to the subject at all. This is the canonical example of disrespect, which makes it both predictable and easier to control. We all attended elementary school, and somewhere buried in the sands of our subconscious lies a treasure trove of quips from grade-school teachers in response to “cross-talking”. As corny as they are effective, these one-liners and mind games are an essential weapon in combating this sort of disrespect. Once you think of one, they will all start returning to you. (One that sticks out in my mind is inserting the talker’s name in the middle your sentence.)

In addition to upholding respect during the session, there may come a time in which you need to take an individual aside after the session and discuss the problems that you are having in detail. While such measures for neck-protection may seem intimidating or extreme, the benefit of having a respectful environment in your session will far outweigh the discomfort of a rare disciplinary moment. To close, if you are confronted with a mere suggestion of disrespect, it is always in your best interest to heed the words of Inspectah Deck and protect ya neck.

Putting the ‘T’ in PLTL
by Benjamin Fleischman

Building a productive PLTL team is a challenging but extremely rewarding endeavor. Nine students who act differently, think differently, and learn differently come together once a week for PLTL. As the Team-Leader, it is your responsibility to help shape the fragmented group of unique personalities into a whole problem-solving team. But how can you do such a thing? By not worrying about the problem set.

I am sure that you have heard over and over again how important the first session is. You were lied to. The first session is important, but so is every other one. In fact, the first session is usually the shortest and easiest problem set, and will not give you a fair assessment of your students. All eyes are on you, but your group is probably just as nervous as you are. So take advantage of these circumstances. Diffuse the situation. Use the extra time to talk to the group about anything. Establish a comfort level that the group will maintain but also respect for subsequent sessions.

Definitely learn the names of everyone in your group as soon as possible. And use them. If you are overly ambitious, learn who everyone is before your first session by using WebSTAC Faces or Facebook. Names help keep conversations going and will allow you as a leader to shift attention from student to student, or just carry on a conversation. It will also make the students feel extra special, like you truly care.

Next, bring “group” food. I am sure you have been told that you should bring food. You should. But you should realize that there is categorically “group” food, foods that are more enjoyable to eat in a social gathering than alone at your computer. I found that bringing in a “group” food during the first few sessions like chips and salsa or Doritos forced students to talk to one another and made them more comfortable around each other.

I recommend starting your sessions with a conversation other than the problem set. If students arrive early, ask about their weekends, if they have any plans, or how classes are going. Casual conversation is of paramount importance when forced into awkward social situations, and PLTL sessions are no different. If your group gets frustrated, do not be afraid to break from the problem set. After all, two hours can be a long time if your group is just working the whole time.

Finally, just being understanding, supportive, and showing a genuine interest in your students will go a long way. Hang around your room afterwards to answer students' questions about Calculus or Chemistry or even about Wash U school life (or about the meaning of life). Encourage students to email you with questions about the material and encourage them to study together when exams roll around. Do not be afraid to say "hi" to students when you see them around campus. Stay excited and enthusiastic during sessions; this small effort will go a long way in helping you form a successful problem-solving team.

Personalities and PLTL: How to Make Them Work Together

by Miranda Lindburg

As you sit in front of your new PLTL group on the first day, staring into eight strange faces, the first thing that will run through your mind is, “Who are these people, and what are they like?” Guess what? It’s *your* job to find that out.

As a PLTL leader, one of your main tasks will to observe. If you’ve already experienced your first session, you probably have already noticed that you have come away with impressions about each of the individual students in your group. This is completely natural, as a lot can be deciphered about what someone’s personality is like from one meeting; however, at the same time, you should be open to allowing those perceptions to change as the semester goes on. Students are often altered by (or themselves choose to alter) their PLTL experience—the guy you at first thought did not care at all may come back to surprise you, and you need to be receptive to such changes.

To start off, though, the question is: what do you do with all those thoughts and ideas about your students? How can you use your observations to guide them to work together the most smoothly? Unfortunately, I cannot give you any sort of formula to apply to all situations—most groups are very different from one another. But to start, think back to your first session (if you’ve had it; if not, just imagine it). You most likely got the sense that some people talked a lot, and some people talked very little. Some knew what they were doing, and some had a slightly glazed look indicating they weren’t really sure why they were there in the first place. There’s a whole host of other things you may have noticed as well, but concentrate on these first. As time goes on in PLTL, one of the main goals of your leadership will be to balance out the dominant and the quiet students. You need to make sure that the quiet ones talk, not just so that the group will be equal, but also so that you know whether or not they are getting it. Conversely, you need to ensure that the dominant students do not talk so much that they trod upon other students’ chances to speak. The easiest way to do this is to call on the quieter students more often. Don’t shut out the talkative ones entirely, but they will probably volunteer information on their own anyway, without your help. Try making them the scribe; that way, they can be a part of the process without dominating the others. In pairs, I found it’s best not to pair the quietest and the loudest right away—allow things to normalize a

bit over a session or two, then try putting them together. The dominant students usually realize after a little while that the rest of the group has worthwhile things to say, and that you're not going to let them walk all over the rest of the group, and soon will talk less.

Having a clash between two students would be difficult, but the main thing you need to remember is that you are there to help everyone work math or science problems, not be a referee or a babysitter. Remind them of that if need be, and try not to let them become too disruptive. Talk to them after the session to see what the problem is, and if it's not something they will resolve by themselves, you may need to take steps to move one of the students, because disruptions that severe can only hurt the functioning of your group. However, this severe situation is not common and probably will not happen.

I realize these are only a few tips, and undoubtedly, you will encounter other differences in personalities that you need to work out. However, believe me when I tell you that you will find ways to smooth things out. It just comes naturally after a while, and pretty soon, you will have a fully functioning PLTL team. Good luck!

∫ **Different personalities dt**
by Nyda Mukhtar

To have a successful PLTL group, you need to make it work together; to make the group work together, you have to make sure the personalities of the people in your group blend in together. Integration of personalities is probably easier than regular mathematical integration, but you still might need some pointers.

Most students in your group will differ in whether they are introverted or extroverted. For some of them, you will have to cajole them, reassure them, beg them or even bribe them to give an answer, while for others you have to put in all the effort to make them a little more silent. In most cases, the more active students would dominate the quieter ones. To make them work together harmoniously, you would need to make sure the quiet students stick with the quiet students, especially in the “Pairs” problems (hey, someone will eventually have to say something) and pair the more active people in the group together (they can shout down each others’ ideas, brainstorm together and not intimidate the quieter students). For “Scribe”, pick the most talkative student to make sure that the other students get a chance to participate.

Another aspect on which students can differ is the difference in their interest in the subject. While some students would be taking the subject to fulfill a prerequisite, others would have a definite passion for the subject. As such, the amount of questions asked can differ widely and some students will feel that the others questions are useless or not insightful enough. To make sure that a battle doesn’t break out, the leader will have to maintain a balance, i.e. make sure you get the basic plug-and-chug formulas across but try explaining the general background briefly. With this, the students can get the knowledge to do most of the problems and even handle some of the tricky ones, and you keep both kinds of students happy.

For other personality problems, such as two particular students not getting along, try to keep them working together by specifying that group discussion is about Calculus, Physics or Chemistry, and that personal problems should be settled outside of the group.

As such, making people of different personalities work together requires all the basic rules of integration: application of general formulas, thinking on your feet and a little bit of luck. Good luck!

Baking the PLTL Cake
by Danielle Porter

You will probably leave your first session of PLTL feeling that all of your students are pretty similar. They all want to be in PLTL and therefore seem to share a similar thirst for learning Chemistry, Calculus, or Chemistry. Yet after some time, you will begin to recognize that each one of the students in your group is different from the other. It will seem as if they transformed from a group of clones to a group of distinctly different people, which is good. PLTL would definitely be the most boring activity in the world if all of the students were clones!

So now you have recognized that your group is made up of distinct people, what are you going to do about it? Well, my greatest advice would be to make a cake. No, I don't mean run to your closest kitchen and bake a three-layer cake. (I mean, you definitely could do that and then come bring me a piece of it.) Rather you should integrate all of the different personalities as if you are mixing all of the ingredients of cake. The flour, sugar, and eggs are all different, but the cake would be nothing without these three ingredients. Your PLTL group is the same way. Though some students will want to talk about everything, from the problem set to their current girlfriend, and others would much rather stay quiet throughout the two hour session; both types are needed to make up our group.

The best way to go about baking your PLTL cake is to really allow each person to be who they are. It sounds easy but it can get difficult. This means that rather than asking every person the same type of questions, ask them different ones. Maybe one student really learns from absorbing the conversations that are had during PLTL. Thus the questions that you will ask him or her will be different from those that you pose to the people who learn best from asking their own. The key is to let them all be who they are. In celebrating these differences, you are successfully mixing their personalities.

Creating a positive atmosphere is another way to ensure that the PLTL cake is a good one. When baking you never want the oven to be too hot or the cake will burn. The PLTL group is no different. If the atmosphere is always hot and people are being malicious to one another and not accepting each other's differences, the group cake will burn. This means that if one person in the groups takes a little longer to really capture the

essence of a problem than the rest of the group, no one should pressure them to speed up. That will only make one person upset and uncomfortable. Thus, to mix correctly you must be the one to initially set the atmosphere. In your rules for the first day, make sure that you have a rule that corresponds to making a comfortable atmosphere. Remember the cake is only good if all of the ingredients are mixed well, so allow the different personalities to compliment on another rather than overpower.

Integrating Personalities: Making the Pieces Fit Together
by Archana Reddy

In every PLTL group, there are a variety of personalities among the group members. One of the most important tasks of the PLTL leader is to integrate these personalities into a well-functioning team. Often during the first couple of PLTL sessions, different behaviors and learning styles will clash within the group. However, with your attention and input, the group members will quickly begin to work together effectively as a team.

It's hard to predict the mixture of students that will form each PLTL group, but there are certain types of students that are found in most groups. Usually there will be at least one student who tends to be very outgoing and talkative. These kinds of people sometimes have trouble focusing on the problem set once they start talking with the other group members before PLTL. Even during PLTL, they will sometimes bring up an unrelated subject and get the entire group off track. This is okay and actually beneficial as a break from chemistry (or physics or calculus) once in a while between problems, but to a certain extent it becomes distracting and makes the group lose focus. In general, it is good for the group members to be friendly and talk to one another, but this can become a problem when it is difficult for the leader to get the students back on track to the problem set after a couple of minutes of socializing. If this starts to happen, the leader needs to be strict with the disruptive group member at that time; usually this only needs to happen once before the students get the idea. Another strategy is to remind the group as a whole that if the talk continues, they might not finish all the problems within the allotted two hours. This usually works and reminds the students that they are in a study group setting.

Another common personality in PLTL groups is the quiet student who is reluctant to contribute to group discussions. Often students are quiet either because they are able to do the problems much faster than the rest of the group or have difficulty keeping up with the pace of the group. When a student works faster than other group members, they tend to work the problems on their own. The best way to integrate this type of student is to have them explain the problems to the small group or partner they are working with or have them go up to the board and explain each step of the problem to the group as they work the problem. A strategy that is ideal to improve communication skills among the

group members is to not allow students to write anything down for the first minute or two after they read the problem. This forces students who work quietly by themselves to really analyze their thought process and become better at conveying these ideas to the rest of the group.

On the other hand, some students tend to withdraw from the group when they feel that the group is going too fast for them, instead of continuously attempting to keep up. It is usually not effective to simply ask that group member or the whole group if they have any questions because this would make the group member have to draw attention to themselves in order to ask the question. The best way to integrate this type of person is to have the other group members make an effort to include them. This can happen easily if a friendly and comfortable atmosphere is established early on in the semester; when the students can relate to one another, they tend to naturally want to include their peers. You can help this process by reminding the students to make sure they are including everyone at the beginning of the session or when you notice that somebody is being left out.

You will probably encounter many personalities in your PLTL group that are more than just the stereotypical “quiet” and “loud” students. The most important thing to remember is to pay attention to these personalities and mold the PLTL sessions to help the different students work together. Eventually, your group will be able to work self-sufficiently as a team and there won’t be much left for you to do!

From Your Ringers to Your Strugglers
by Chris Schipper

You're probably one or two sessions in right now and already have a sense of things. One thing you have surely noticed (unless this is your first session) is that your group has a range of characters in it. That means that you have a legitimate job to do when it comes to creating a solid dynamic. The way I have come to understand it, and I assume you soon will as well, is that there are going to be a few common types of PLTL students, ones that probably three quarters of all groups can claim to have. Some of them are...

The Ringer. These are the fast working, fast thinking dominators of the PLTL group. They always know their stuff and always want to soar through the problem sets. It is not that they are trying to ruin the group or anything like that; they just tend to have a natural instinct to be independent and to burn through their stuff. They can be a great asset in situations where nobody else understands something, but be wary, they can also kill a group dynamic and leave everybody else in the dust.

The Rider. These people try to get by on minimal effort. They claim to have finished the problem after copying someone else's answer and they don't try to understand it. For them, it is all about getting out early and having a fun time. They really don't seem like they are coming to PLTL to learn, and this attitude can be difficult to handle.

The Struggler. You could say that these are the opposites of ringers. These are the people that are in PLTL because chemistry or math or physics maybe isn't their strongest thing and they need the extra work and help. They take a little more time to grasp concepts and can often be the last one still trying to understand a problem. This may sound all bad, but it really isn't. Remember that PLTL is about the group learning, and giving an explanation, which the others probably will need to do, does a lot to cement the concepts in their minds.

The Lockbox. These people do the work quietly and diligently, but also by themselves. They take a little more than most to get into the group dynamic and it shows. You will know that your group is in full swing if even these guys or girls are jumping in and doing the team thing.

Obviously there are more than just these personalities involved, and within these categories people are very different. So what does it take to integrate all of these different people and get the group rolling strong? There are many important ideas to think about. With regard to the ringer, try to control them. Have them scribe, have them write everything down; don't let them go ahead to the next problem. They will get used to explaining and moving slower. With the struggler, just try to keep them involved and not feeling worried about slowing the group. Try to have them work with people of similar abilities, and try to accommodate their learning style. With lockboxes, ask questions, get them to work with people, get them to open up.

The best way to do any of this is to have your group become friends. Some are against any joking around, but I say encourage it when it happens, at least to an extent. It is incredible how much better friendly people are as a group. Lockboxes are comfortable to be completely involved, ringers are happy to explain and take their time, strugglers don't feel too afraid to learn what they need to learn and riders become legitimate members. The best ways to make your group friends are to bring food every time, have some time at the start for everyone to just talk about their weekend or what they did the night before, and encourage some fun at the expense of a little work. All those different personalities come together beautifully if you can just do that.

Getting It Together
by Ronnie Slipman

Perhaps one of the most difficult aspects of leading a PLTL group is incorporating all of the different personalities of the individual members. Sometimes, the personalities of all of the group members mesh well together, and little, if any, problems arise. More often than not, however, this is not the case; perfect harmony is unfortunately the exception and not the rule. The mark of a truly great PLTL leader is therefore the ability to bring people together, to take advantage of their differing personalities, and to encourage the development of a group that benefits every individual member to the greatest possible degree.

The first PLTL session is the time for the new leader to scope out the group members' personalities and to ascertain how best to deal with their different characteristics. Often, students placed in a single group can represent a wide swath of the country; imagine a group with people hailing from rugged Maine, urban Los Angeles, and the rural Deep South. A PLTL leader presented with the task of leading this group should sense both challenge and opportunity. Group members may not agree with the ways other students solve certain problems, they may be initially divided by the inherent regionalism of the country, and they may simply clash in ways that, at first glance, make them seem irreconcilable. Their differences inevitably reveal themselves. The students may fight, argue, and hardly listen to the questions asked. An overwhelmed leader concludes the first session exhausted and harried. Hope, however, is not lost.

The following sessions are important opportunities for the leader to bring people together and to encourage them to respect each other. If problems are quite serious, a direct discussion of the incompatibility issue may be necessary, but careful wording and directions are usually sufficient. A leader might encourage the students to make their differences, whether regional or purely personal, sources of bonding and interest, rather than points of discord. Additionally, when working as small groups, the leader ought to place together the members with the most starkly different personalities. At first, this may seem counterintuitive, but, in fact, by forcing people with very different qualities to work closely together, they will often adapt to each other and, eventually, get along well – or at least better – together. Naturally, working together and making accomplishments

is better than exhaustion and arguments on any given day. By constantly mixing the students who work together, each individual will adjust to each of the others on a one-on-one basis. Once this has been accomplished, the group will then function much better as a whole. Ideally, the students will have resolved their differences, and they may perhaps develop into friends. The time and persistence necessary from the group leader will vary from group to group, but this truly can happen.

Frequently, the most effective ways for dealing with rambunctious groups include devising games, bribing with treats to calm the mood, and simply addressing the problem directly and formally. The leader must use his or her own judgment when determining what direction is best to take for a particular group of students. What is most key is not to become discouraged and always to project an outward, positive and enthusiastic attitude and appearance. The leader serves as a central model and director for the group and therefore wields a strange sort of power over the behavior of the individuals. By providing an example of willingness to cooperate and to work together and by encouraging the others to do likewise, the group leader can hopefully direct the group in a way that can lead to the greatest possible success for the members and for the group as a whole. With these ideas in mind, the PLTL group is loaded to catapult itself out from the doldrums of disaster into the splendors of success and accomplishment.

Integration by Parts
by Christian Wichterman

Any group of seven or eight students chosen at random from Wash. U. is bound to be different in many ways. They will likely have several different hobbies, goals, interests in the subject at hand, methods of problem solving, and personalities. It becomes your job as a PLTL leader to bring together these personalities and interests in a way that allows the group to function together and solve problems efficiently and effectively. On the path to becoming a well functioning PLTL group, there are a few common problems you could encounter from such differences in personalities, and I have reflected on some advice to help with those situations.

Perhaps the first personality trait you have noticed is how outgoing each student is. There is usually at least one person who has no problem sharing his or her mind, but more often there are students who are shy and typically do not willingly participate in the group. Participation is key to the function of a PLTL group, and can only be accomplished when each student feels comfortable in the environment. One of the best ways to create a friendly environment is simply to ask the students about their weekend, their past test, how their break went, or any other friendly conversation starter. Your main role is as a Peer leader, so it is important to be friendly with the student and create an environment where they feel at ease to talk.

Another approach to the shy student problem could be to ask them to explain themselves to the group more often, or have them be scribes so that they can interact with the group without the stresses of worrying whether they are doing the problem right or wrong. Usually, after a few sessions of being friendly with them and encouraging their participation, you will find they are much more likely to speak up when they have an opinion about a problem, or ask for help if they are not following along. Creating a friendly environment not only helps with the shy-student problem, but with any personality situations that could arise. However, there are some more specific methods you can use for other situations.

It is not uncommon to have a student older than you in your PLTL group, or at least older than the other students. This often leads to the older student either being less involved or more easily frustrated when the younger students are not staying on track.

The most important thing to do here is to treat them like a peer, not as if you are their teacher. A PLTL leader is supposed to facilitate the learning and help keep everyone on track, but that does not have to include talking down to any of the students or acting superior to them in any way. By keeping it clear that you are a peer there to help facilitate the group and keep everyone on track, older students are bound to feel more at ease and willing to participate.

And lastly, there is the outgoing student who always wants to have the first say. This personality trait starts to actually cause a problem when the student begins to interrupt the other students, or not give other students a chance to talk. It is important that this student is not allowed to interrupt the others as this greatly inhibits the quieter students from emerging out of their shells. However, the more active student's outgoing personality is important to the group as it creates a more sociable environment and often these students are more than willing to explain themselves to the others to help clarify a problem or concept.

These were just a few examples of the various personality traits you will encounter, but it is important to take each person on an individual basis and assess what would help the person fit better into the group, and what personality traits the person has that can be contributed and integrated into the group. The best thing to help integrate different personalities is to create a friendly environment that encourages participation and respect so that the group can evolve to function at its best.

Recipe for Disaster: Too Close for Control

by Carly Berg

Peer-Led Team Learning. We throw this phrase around a lot, but it is easy to forget what our role in the PLTL group actually is. As group facilitators, our job is to mold a group of independent individuals into a cohesive, functional academic-investigation team. We need to inspire the students to delve deeper into problems and guide them towards producing the answers to their own questions. A PLTL group facilitator needs to challenge his/her group members to move past their academic insecurities and dependencies, to seek out the answers to their questions and then look further to derive an even deeper understanding of the material. These are lofty goals, indeed. I could go into a to-do list of the things you should do to make your first PLTL group a successful one, but I will leave those suggestions to another leader. Instead of revealing what you *should* do to accomplish the PLTL goals, I am going to warn you against making one mistake that could make fulfilling your role as a PLTL group facilitator even more difficult. A key ingredient, you could say, in the recipe for disaster.

One of the most difficult aspects of being a PLTL leader is the fact that the students we are leading are our *peers*. Some of your group members may even be in your grade. It can be hard to maintain control of a group when the group members may not automatically look up to you and view you as a leader. One key ingredient for a recipe for disaster that you should try to avoid, therefore, is becoming too friendly with your group members. It is tempting to act more as a friend than a leader so that the group feels comfortable; however, becoming too friendly will make creating the best PLTL group difficult.

Continuing in that vein, one important mistake to avoid is sympathizing too much with your group members. Your group members will likely complain about the material at some point during the semester, especially in the first weeks when they are surprised by either the workload or the difficulty of the material. Try to avoid agreeing with your students on points like these. Instead, turn the conversation away from complaining and toward more constructive topics such as the aspects of the week's material that the students find interesting or that they would like to explore a little deeper. It is important that you attempt to inspire your students to learn the material well, not allow the group

members to become complacent and blame their inability to understand a topic on the material itself.

Furthermore, if you become too friendly with your students, you will not be able to control the group, and serious issues with group dynamics, timing, and staying on topic may develop. A leader needs to be able to control his/her group. If the group views the leader more as a friend than anything else, the respect that is required for effective leadership is more difficult to develop. While you should be friendly with your group members, you do not, and should not, become their friends. A leader needs to be able to call a group into order when they get off topic, resolve conflicts if they arise, and provide a model to which the group members can aspire. While it might be easier at times to simply become friends with the students in your group, doing so will only undermine your authority as a leader and your ability to develop an effective and successful PLTL group.

Follies of the Impatient

by Greg Booth

I think that the biggest challenge for PLTL leaders is patience. You probably have a decent grasp of the material and you may have taken courses above and beyond the one for which you are leader, giving you a sort of mastery of the subject. When you step into that PLTL group, don't forget that some of the students may have no prior knowledge of the subject. You didn't learn the material overnight and neither will they.

Above all, never act or speak in a condescending manner. I witnessed this while observing a fellow PLTL leader and I think it's safe to say that there is nothing more detrimental to a group's morale. The atmosphere in the room was cold and awkward and the effect of the leader's poor attitude was a withdrawn and hesitant group. The leader was irritated because a student just couldn't grasp a concept. It is our job to encourage discussion and to help students gain confidence by encouraging them to actively support their ideas on how to solve problems. Insulting someone because he/she proposed a wrong theory or because he/she cannot solve a certain problem will only turn that person away and create distrust between you and the group.

Be mindful that not everyone learns at the same pace. Make sure you encourage not only the group as a whole, but also the individuals in their own progress. Don't leave questions unanswered. Don't move on to the next problem if not everyone has finished writing the problem and understanding how it is solved. Keep in mind that although this takes more time, certain questions may be posed that help others better understand the problem than if it initially is worked too quickly and superficially.

You must be very patient with attendance. The students will be told that they can miss up two sessions during the semester before being kicked out, but odds are you will have several people that miss more than two sessions yet still want to come. I know that the PLTL headmasters would probably disagree with how I feel, but if you feel that the student who misses three or four sessions still could benefit from the PLTL experience I think you should let that person continue coming. We all know how busy WashU exam and paper schedules can get, and I think that if a student misses a couple sessions due to higher priority work then so be it. We've gotta do what we've gotta do. However, don't let this become standard practice in your group. During your first session, tell your group

exactly how you feel about attendance so that students know it is unacceptable to skip just because they don't feel like coming. Attendance is almost certain to dwindle towards the end of the semester, but don't forget your patience and feel free to email weekly, encouraging reminders of your sessions.

A little patience goes a long way. Keeping your cool and always being encouraging will help develop a cohesive group with students that trust and respect you. This will ultimately lead to better attendance and better efficiency during your sessions. Never: be condescending to students, leave them behind if they don't understand a concept, get frustrated if you feel they aren't learning quickly enough, or automatically kick them out of your group if they miss more than two sessions.

Recipes for Disaster
by Rachel Bernard

While writing this essay, I was taking a five-hour bus ride back to Chicago. I was getting hungry and began thinking about all of my favorite foods from home. I started thinking about the precision and adaptation of my mom's cooking. She starts with a recipe, then tests her creation along the way and adds different ingredients until it tastes just right. I realized that leading a PLTL group is surprisingly like cooking. There are a lot of ingredients that go into making a functional group. Done right, a PLTL group can be fantastic. But assemble the wrong ingredients in the wrong order and you've cooked yourself up a disaster.

Think about your favorite cookie, chocolate chip perhaps. Think about the way that all of the chocolatey and sweet deliciousness just melts in your mouth. Now imagine smothering that cookie with ketchup. You might have thought that since ketchup goes well with fries, it might add to your cookie, but obviously that is false. This was an issue that I had in my PLTL group. I would do things in my PLTL group that would be fine for other occasions, but didn't really work for my group. I would tell stories and jokes and encourage chit-chat. For the first weeks this worked well to encourage participation, but quickly it developed into a distraction and an ongoing focus problem. You're going to have to learn to distinguish between what is okay for your group and what is more appropriate for you to do while hanging out with friends.

Sometimes I feel like PLTL is like a glass of lemonade. You have to make sure that it's sweet enough or it leaves that bitter taste in your mouth. PLTL is the same way; you have to bring that positive environment. Sometimes it will be hard. Lots of times my group would complain about things that they didn't like about the class. It's easy to jump on the boat and start listing off all of your least favorite things, but that's not always the best decision. For better or for worse, your group looks up to you as a mentor in the subject. If you complain about the class, they're more likely to hate it as well. You need to sweeten up the situation. Talk about things that you do enjoy about the class or the subject material. It will give them a better aftertaste.

Your group members may seem tough on the outside, but for the most part, they're good eggs. The first day, they'll most likely be shy and quiet. You have to kind of

work on them before they open up at all. And they can be deceiving. I had issues with my group pretending to understand things that they didn't. Sometimes they would get intimidated by the more advanced students in the group and tell me they were ready to move on before they really grasped the material. They're tricky like that. But don't let them fool you. Ask them questions about the subject matter until it's clear that they do get it. Break through that hard outer shell and you'll see that they're all there to learn and they want your help.

What it all boils down to is that cooking up your PLTL group takes a specific recipe. Like cooking with food, it might take a couple tries to get it right (ask my roommate about my experiences in the kitchen). A recipe that works for other people might not really work for you. That's fine too; the best cooks alter simple recipes to make them their own. Finding out what works best for you and your group might take a few tries, but believe me, the end result will be delicious!

Recipes for Disaster
by Chris Chesley

As a new PLTL leader, there is one thing you need to know: at some point during the semester, something is going to happen during a PLTL session that you may not have been prepared for. Maybe not the first session, maybe not the third session, but most likely by the end of the semester you will be presented with a difficult situation that you may feel you could not have possibly anticipated and are thus put in a potentially stressful and otherwise unfortunate situation. You may be asking yourself, “How can I prepare for such an event?” Luckily, this semester I was put in such a catastrophic situation and by using my experience as a case study, I can demonstrate those things that a new PLTL leader should and should not do in handling his or her PLTL group.

Many things went wrong during my specific experience with a PLTL session that went horribly wrong. First off, I was locked out of my room around 12:40 PM and had to meet with my PLTL group at around 1 PM. Unfortunately, I could not get into my room (and thus obtain my necessary PLTL materials, especially the problem-set worksheets) until about 12:59 PM. While this situation is rather specific and illustrates why it is important to keep your room key with you at all times, it also demonstrates the degree to which you must plan ahead for your session and focus on your task for the day. As a PLTL leader, it is your responsibility to make it to your session on time (if not earlier) and while it seems simple, it is absolutely crucial that you devote enough time in your day to your PLTL group.

When I finally arrived to my session (approximately 15 minutes late), I faced another issue: out of the eight students who regularly attended my session, only two showed up that day. While this is to some degree a reflection of the priorities of my students, it also reflected my lack of diligence in enforcing the attendance policy. PLTL leaders must be proactive in pressing upon his/her students the importance of attending each session and if the leader senses a potential attendance issue early on in the semester, the issue must be dealt with immediately. Do not leave any trace of ambiguity about any of the rules that you set out on the first day and make sure that any issues that arise regarding your expectations are dealt with as soon as they arise.

Dismayed at the attendance turnout for the week, I nevertheless kept an upbeat attitude. As I reached into my backpack for the problem sets, I was faced with one final blow: I had forgotten all of the worksheets in my room save for one. While this shortcoming further demonstrates the importance of planning ahead, it also demonstrates that your PLTL experience and the overall group dynamic are fully carved by your own hands. It is up to you to turn situations like these into either a nonetheless informative session for your students or a failure. In situations like these it is important not to lose your cool and more importantly not to let your students think that you are not prepared for the situation. In my case, I turned the session into a large one-paper-one-pencil exercise that in the end worked very well. Despite the many things that went wrong that day, I was still able to hold a successful and informative session for the students that had shown up by not panicking and remaining flexible.

Though your experience may not be as bad as mine (and I hope that it isn't), my experiences should give you an idea of how to approach all of your sessions. First off, plan ahead. Also, enforce your rules. Don't allow ambiguity in your expectations to culminate into an issue later on during the year. Finally, don't panic. You are the ultimate guide for your group and handle issues that arise with this in mind.

How to Avoid Food Poisoning Your PLTL Group

by Fidel Desir

Step #1: To a group of ten students, add a pinch of fresh kindness, a spoonful of patience, and a cup of recently-harvested leading skills. Then, mix well. Step #2: Place the mixture in the oven at a high temperature for two hours, and regularly make sure to check its consistency during the cooking process. Step #3: Enjoy!

Having been a member of a PLTL group for at least one semester, you might think that you know almost everything involved with being a PLTL leader. All they have to do is guide the students down the right track to solving a problem and occasionally help them whenever they get stuck. A little friendliness, patience, and leadership skills are all you need to help you do so. However, in addition to these necessary ingredients, there are several other crucial ones that will surely spoil your PLTL recipe if you inadvertently forget to add them to the mix.

One such ingredient is preparation. This ingredient includes being on time, making sure the study room is in good conditions for a PLTL session, and bringing the necessary materials. Always arriving early to your sessions makes you more responsible and professional as a leader. Arriving late to the sessions, on the other hand, will make the students think that the PLTL group is not important to you. Being early will also allow you to make sure that everything in the room is in order (you do not want students sitting on the floor if there aren't enough seats!) You should also bring the essential materials to the session, such as markers, white board erasers, and the weekly attendance sheet. There are few things more disastrous than having to do an entire problem set about Lewis structures, for example, without having a marker with which to draw the structures on the board.

Another ingredient commonly forgotten is revision. It is incredibly easy to go to PAM sessions every week and just write down the problem set answers blurted out by your fellow PLTL leaders, only to attend your own PLTL session the following weekend expecting your group members to know the reasoning behind all the answers. However, it is essential that you do not forget to review some of your course's concepts not only before your PLTL sessions, but also before every PAM session. This ingredient is pricey and difficult to obtain for most leaders due to college students' constant lack of time.

However, if you forget to add it, you may not remember some of the material, preventing you from helping and asking the students appropriate questions whenever they have difficulty completing the problem sets. This will make your group lose its respect for you, will ruin the leader-student dynamics, and thus will lead to inevitable disaster.

Finally, initiative is an ingredient that should always be in your mix. If you see something that goes against the PLTL Philosophy or that seems to disrupt group dynamics, it is your responsibility to fix the problem. Sitting back, ignoring the problem, and leaving it up to the group members to fix it themselves will result in pure catastrophe. For instance, if one of your Pairs is not talking, you should go up to the students and attempt to start a conversation. If your students are constantly being late, it is your job to send them an email or talk to them in person about the issue.

Forgetting to include any one of these crucial ingredients will most certainly lead to unwanted PLTL group food poisoning and upset stomachs. However, once you have incorporated all of these ingredients into the mixture in the appropriate amounts, you are ready to have some delicious PLTL cake. Don't forget to include the secret ingredient: snacks!

Everyday Recipes

by Jake Fantus

One part sugar, one part spice, and a little bit of everything nice; using these ingredients a PLTL session should always go just fine... or should it? The truth is it is relatively easy to make a mistake, as a PLTL leader, the question is when you make one will you be ready.

The biggest mistake I have noticed in my involvement with PLTL deals with the inability to create a cohesive group. It is imperative to make sure everyone understands the PLTL mantra in the first session so that a leader can refer to it session after session should people start to lose sight of what is important. More so it is essential that as a leader you do not lose sight of what is important, because in doing so your group is surely headed for disaster. Remember always, PLTL is for the students who genuinely want to learn more about a subject and are willing to put time and effort into it. If you lose sight of this, or if any member in your group does, there is no way to build a tight-knit group. Failure to build a close group is not a disaster, but if allowed to heat up for a few sessions (very corny pun) it will surely lead to one.

Another common recipe begins with a misunderstanding in the group. Often a leader has to decide whether he/she should clear up any misunderstandings dealing with conceptual problems. This can be quite a conundrum, because although very important it is not the point for the leader to teach the group but for the group to teach themselves. However, sometimes clarification is needed, because without it the group will be unable to finish the problem set at hand. Personally, I suggest asking questions and trying to guide the group to the correct answer instead of just explaining a concept outright, because if you always explain the concept to the group, they become dependent on you as a teacher. From here the results typically snowball, the group stops doing less and less work outside of class and depends on you more and more as the source of learning the particular subject. Once again, you arrive at a situation in which you could have fixed a problem long before it affected your group in such a way as to make it dysfunctional.

The last common mistake that could reek havoc on a PLTL group is tardiness, and absences. From the first day set an example by coming in early and setting up the room. In addition, make sure the group understands how attendance is to work; if they are

genuinely interested in being involved in PLTL they should attend every session, and if they are not they should make up their mind rather than wasting their own time and yours as a leader. Of course, do not say this bluntly to the students, but make sure that they understand it well. If you do not care about attendance and just let anyone come to your group at any time, you are doing a disservice to the current group members who come to every group. Allowing tardy and frequently absent members to participate in the discussion equally just encourages the rest of the group to behave similarly. This turns your group into an irregular bunch of people who may or may not attend. Once again, to prevent disaster one must nip this problem in the bud by setting the tone early and taking preventive measures by talking to people who have poor attendance or are constantly late. Do not let all of these situations worry you, because although it is very easy to make a mistake as a leader it typically is just as easy to fix it. As always, any time you recognize something is wrong, fix it as fast as possible. If you do not, you are adding the primary ingredient to a recipe calling for disaster.

Perfecting PLTL
by Amy Fletcher

So you survived your first PLTL session and it was hopefully easier than you imagined. It should be smooth sailing for the rest of the semester right? Wrong! Now that you have set the bar for your PLTL sessions, there is plenty of opportunity to make mistakes. You could fall into a pattern that your group finds boring, you could be too forceful and be viewed as a “know it all” or “taskmaster” instead of a peer, or you could just not lead sessions in a manner that is viewed as beneficial by your group. As the leader of your group, you have a great deal of control over how your group develops over the course of the semester. Perfecting a PLTL group is a lot like trying to perfect a dish or meal. By combining the right factors and practices you can create the perfect PLTL and avoid disaster.

When you begin preparation of any meal, the key is organization and preparation. Before you begin cooking, you must gather ingredients, research a recipe and create a game plan. A PLTL session is no different. One of the most important things to do as a PLTL leader is to establish a sense of respect within your sessions. If you as a PLTL leader are not respected by your group, it will become difficult to execute the various methods of the problem set, complete the problem set, or enhance the group dynamic. By properly preparing for PLTL you can avoid many of these problems. Proper preparation includes going to the PAM class, doing research on topics you are unsure about, and contacting your group before sessions to remind them of the topic for the week and to make sure they remember to come to PLTL.

Another key to preparing the perfect meal is patience. By trying to force a meal along by turning up the temperature or cutting corners, you end up burning or otherwise ruining your dish. By rushing or forcing your PLTL group into a certain mold too fast, your group will associate resentment and possibly frustration with PLTL instead of looking forward to your weekly meetings. Creating a balance between maintaining control and keeping the situation relaxed can not only keep you from tearing or ruining that flaky piecrust, but help make your PLTL sessions productive and enjoyable for both your group and yourself.

Variation is another important aspect of PLTL. As much as we love those tried and true favorite meals, eating the same thing day after day becomes boring and unsatisfying. If students are going to willingly take two hours out of their week consistently it has to be for something they find worthwhile. As helpful as PLTL problem sets can be in seeing new problems, you can obtain them from the course's Telesis site. By switching up PLTL and working in a different order, bringing homemade treats one week and just candy the next, or by providing some sort of incentive such as extra problems or models to aid in explanation, the students in your group never know what to expect or if they are missing out on something.

Leading a strong and effective PLTL group is not an easy task. It takes time, dedication, preparation, and effort. However so does preparing a delicious meal, and just like a meal that can be enjoyed by many so can a good PLTL group. If you as the leader put a little effort into your group, taking care to avoid trouble spots such as falling into a rut or pattern that can be boring, over-dominating your group by being too forceful, and preparing adequately for each session you can create a group that is beneficial and enjoyable for students and leaders alike.

What Could Possibly Go Wrong?

by Chen Xu

Everything! As bad as this may sound, it's true. I mean, honestly, you're a PLTL leader, one of the top students in your class, a person who knows the material like the back of your hand and actually knows how to impart your knowledge of the subject onto others, aka TEACH! The only problem is that PLTL, as you should know by now, is nothing like simple tutoring. There are things that could come up that may compromise your competence in the eyes of your students and as a result...well basically if that happens, your semester will not go so well, as depressing as that may seem.

One of the things that I personally experienced was giving in to the students from time to time. You go through the problems in PAM and you all come to a consensus on what "answer" the students are expected to give and you stick with it. However, not every answer to a problem will have the same format; that is they may look different, but in reality, are equivalent, for example $-\ln(\cos y)$ and $\ln(\sec y)$. If you keep your mind on your "answer" and see any other answer as some digression from the correct path of problem solving, then you might come across some uncomfortable situations in which the students wonder why their answer is not correct when the answer you try to explain is the exact same one as their answer. This of course instills doubt in the students wondering if you actually do know what you're doing and talking about.

Another thing to try to keep in mind is that you have these kids for two solid hours and no human is going to be happy for every minute of those 120 minutes. Frequently, some of the students become restless and frustrated with the problems; some will inevitably put their head down and sleep. My suggestion is to win them back with candy. You should have been well informed by now that starting with the first session, you should bring food to help relax the atmosphere, make it seem less like a classroom and help the students feel more comfortable speaking to one another. However, by the third session, the students will be expecting you to bring food, that there's some magical PLTL food silo where we all go before our sessions and grab the goods. My suggestion is to bring candy or food, but do not give it to them at the beginning; instead, start with the basic formalities of "How were your weeks" and so forth and then have them jump straight into the problem set. When you see that they are starting to get really irritated

with the work, then you can bust out that bag of sweets in your bag and watch in amazement as they all jump up, attack the candy like animals, and then, reenergized, attack the problem set with new found energy. Sounds surreal, I know, but fortunately for me, it worked!

I know that there are other things that can easily go wrong, and I hope that if any of those things do happen to you, that you can find the solution right off the bat and not have to experience an awkward situation in which you can think about ways that you could have fixed it later, after it happens. Good luck to you, and enjoy being a PLTL leader!

Damping Dynamics Drama
by Katharine Brown

An important part of being a PLTL leader is being able to deal with any problems that may arise from group dynamics or individual student needs. Many groups go the entire semester without a hitch, while others tend to take a while to become united and work well as a whole. The way a PLTL leader handles a group that experiences any difficulties has a big effect on how well the group can learn to work together and overcome any obstacles that come its way.

Many times it is difficult to ensure that all of the members in a small group are engaged in the worksheets, especially when there is a dominant personality present in the group. Sometimes students feel uncomfortable volunteering to answer questions when they do not know the group members, and it can be difficult to get full participation from everyone. In this situation, it is important not to just let it go, because by the end of the semester no one will be willing to do anything. Calling on people individually is a good remedy to this situation, as is starting off the problem yourself by sending everyone in the right direction. If you single out each member it will become clear that no one can hide in a small group and slack off, and as a leader you will not allow that to happen.

It is also very important to keep up with attendance and clarify your policy on what the students should do if they are going to miss a class. In the beginning, I received emails whenever someone could not make PLTL for a legitimate reason, but by the end of the semester some group members got stressed out and would forget to email and occasionally someone would not show up. To deal with this type of problem, email the students as a reminder for class, and make sure to encourage them to email you if for some reason they cannot make it. Then it is hard for them to use the excuse that they didn't know PLTL was happening and if they do skip you can email them asking why, indicating that they really should try to make every class.

Finally, the issue of a dominant personality can be remedied by mixing up pairs, calling on people so that you regulate how much he or she speaks, and using the learning technique one-pencil-one-paper. In this technique, one of the pair members dictates how to do the problem, and the other member writes it down, as long as they both understand. It is important to vary the way the pairs are arranged, because the more aggressive student may be better in either position. Sometimes it can be hard for people who feel strongly about how to do the problem to wait until someone else tells them what to do, and other times it can be difficult to have them dictating

because they could get frustrated and the “writer” may become intimidated and write everything down even if he or she doesn’t understand it.

When the members of your group don’t necessarily click with each other’s learning styles, don’t panic or give up—this happens more often than not. As long as you rearrange the different methods and get creative with how to direct your group, it will learn to focus together and work as a team with a little bit of guidance from you.

Trumping the Stumping: Dealing with Group Problems that Just Happen
by Frank Bruno

Scenarios will arise that you have never encountered, and quite frankly you will not know what to do. My goal is to introduce you to possible dilemmas that will randomly occur within your PLTL group. These problems are not resultant of your inability as a leader, but if they are not handled properly, that is exactly what they will become. I will tell you what I did in those instances, but by no means am I absolutely correct. What works for one, may work for none.

The first problem that I ran into was an over dominant student. Obviously, everyone is going to have a different level of understanding of the material. When one student seems to know everything, and she detracts from the group learning environment by answering all the questions, there are a few strategies that you can implement. First, give that student the role of the scribe. Scribe cannot input information; rather he only writes what other students in the group say. If he starts writing without the aid of the group, say something like, “I didn’t hear anyone say to write that.” This is a very passive form of scolding, but hopefully the student will get the idea that the others need to learn also. Now, suppose you ask a general conceptual question to the group, and this one student answers before anyone else has a chance to reply. As a leader, you must not yell at the student, but rather bring up the concept of respecting each other; it is on the contract they signed. If you want to be cruel, you can interrupt the student by calling on someone who has their hand raised. The student will stop talking, and hopefully learn that group learning involves everyone’s input. The goal in dealing with this situation is to subtly let the student know what he is doing is not proper, but you do not want to make him/her feel awkward. If you are too harsh, the group dynamic and your trust as leader will be destroyed.

Another problem that initially occurred in my PLTL group was lack of communication within the group as a whole, and within pairs and small group problems. Some groups will be more talkative than others, but in my case, I had a quieter group. So for information on dealing with an over-talkative group, please refer to another essay. You put the students in pairs or small groups to solve a problem, and you observe that each student is solving the problem separately. In this situation, I would approach the small group, and I would start to ask general questions about their problem solving method. If one person were dominating the discussion, I would specifically ask the other person to explain it. Usually, the other person does not know what is going on, so upon admitting that, it allows a discussion to occur between the two students. Now,

you can move on to the next group. In terms of the group not talking to each other as a whole, time is the best answer to this problem. The group needs to get comfortable with each other, and there is no way to speed up this process, but there are ways to facilitate it. You can have small, non-subject related, chats before the PLTL session starts. This lightens the mood and makes the students more comfortable.

The final problem I want to introduce to you occurs as the semester starts to become more hectic. Everyone becomes very busy, and it seems that the students are not prepared for the PLTL session. They consistently spend long periods of time looking through their notes and the textbook. In this case, it is obvious that the students are a. Not doing their homework b. Not going to lecture because they plan to watch it online later c. Not going to recitation d. any combination above. You have to stress the fact that PLTL is not the place to learn the subject material; it is a place to share each other's method of learning. If they are taking a class that is video taped, remind them that it is very unlikely that they will actually watch the lecture before the next class. Also, they need time for the material settle in your mind. Overall, you need to remind the students of the contract they signed and of the goal and purpose of PLTL.

Those were just three examples of the many problems I experienced as a first time leader. Hopefully my solutions to these problems will make you a more prepared PLTL leader. Good luck trumping the stumping.

The Hot Seat
by Karen Heisler

We've all seen it: the (once)-popular game show, originally hosted by none other than Regis Philbin, that puts people in the hot-seat, with the mere objective of answering fifteen questions correctly for one million dollars. Not only are the questions multiple choice, but contestants are given *four* (a new addition to the show) lifelines to use at their leisure. Sounds simple, right? Here's the thing: I think I have seen a grand total of one winner (ok, granted I did not actually watch the show that much). The point is that things that appear simple at the outset may not be as easy once you are in the hot seat. You may find that you have experienced, or will experience, a little more pressure as a leader than you thought you would. There will be difficult dilemmas that you will have to overcome. Rather than letting these difficulties force you to walk away, here are some lifelines to help you reach that million-dollar goal.

Here's the situation: your group is stumped on a problem. They seem to have no idea how to even begin the problem. Moreover, they keep asking you questions that you do not know how to answer. The heat is on-what do you do? Use a lifeline!

1. Call a Friend: How great would it be if you could just call in a friend from your PAM class and ask him/her the answer? Unfortunately, this is not the case. Ok, so what now? Consider the resources that you *can* call on. Have the group members look through the book for similar problems, and look up the answers to the questions they are asking. Also have them look at notes from the previous week, and encourage them to discuss main topics they have learned. This may spark some understanding and enable students to make connections and begin the problem. By reviewing main topics and strategies, the group may see what skills the problem requires, and thus see how to approach it. Also keep in mind that when a friend is called in the game show, the person in the hot-seat must relay the question to his/her lifeline. This is a useful strategy: re-word the question slightly (or summarize it) and then re-direct it to the group. Simple re-phrasing may ignite some understanding.

2. Ask the audience: The ever-popular lifeline of both contestants and PLTL leaders. By redirecting the questions to the group, you force members to use their own materials to answer the questions. This encourages discussion and learning because in reviewing material, ideas are often reinforced or brought in to discussion. When students discuss ideas, they often understand and remember them. Moreover, there is a fairly reliable notion of the "wisdom of the crowds;"

that is, groups of people generally tend to answer questions correctly. Thus, once you have provided some initial direction, even if it is simply by re-wording the question, have confidence that the group will most likely work it out- just give them a little time (not too much, there is a time limit on the game show and in PLTL).

3. 50/50: If the group is still stuck after these efforts, try to ask pointed, guiding questions, or give them a little help by reviewing applicable topics. Do not tell them the answer (that would definitely NOT be 50/50- it would be something like 100/0), but provide a fact, and equation, or a reminder of a useful topic. Make them work it out, but do not leave them in the dark.

4. Replace the question (I know what you're thinking: this is a new lifeline, I did not just make it up- watch the show sometime): So you cannot just erase the problem from the problem set, and it is not advisable to simply skip the problem. One strategy to try is to mix up the problem-solving strategy. While these strategies are important, do not feel that they are "set in stone". If you feel that the group may be able to come up with a solution (or at least a way to approach the problem) by switching the strategy (such as making the problem a small-group problem, etc.), do it. As long as the group is still working together towards the answer, the objective of PLTL is still being met.

These are the useful lifelines of PLTL leaders when you find yourself in the hot seat. Remember that we have all been there- do not just walk away. Use the lifelines. Remember that if all else fails, you can tell them to ask the TA's or professors, or get back to them on the question. Not every single session will be a million-dollar session, but each session will be worth something as long as you encourage the group to work together and provide some guidance to the group.

Everything that can go wrong, won't (if you know how to deal with it)

by Anupam Kumar

There are a lot of possible situations that can arise while you are leading your PLTL group. For the first few weeks, everyone in the group will be polite and nice. As soon as people get comfortable with the situation, they stop being nice and start gettin' real. Here are some common, problematic occurrences in groups and some suggestions of how to, and how not to, deal with them.

So, what if everyone in the group decides that the primary objective of PLTL is to finish the problem set as quickly as possible? The group fragments and works individually during the small-group problem solving methods. How can you handle the situation? A possible solution that has worked in the past is the "one-pencil one-paper" technique. Although its name is quite fancy, the actual method is rather simple. For pairs and groups that tend to work quickly and individually without discussion, simply take away the pencils and papers from the group. Then, give a student a pencil and the other student the paper. As a result, they will be forced to communicate and work at a slower pace.

Another common situation that I found myself dealing with was the presence of a student who seemed to lag behind and frustrate the rest of the group. This is an extremely sticky situation. The more individual attention you pay towards that student, the more frustrated the rest of the group gets due to the time lost. To remedy this, during group, I found it useful to pair that student with another who kept up with his work and usually answered the questions correctly. That way, a student would help explain topics and problems during small-group work rather than eat away a large chunk of time during whole-group discussion. Also, earlier in the semester, I encouraged her to keep up with problem sets and attend lectures regularly. One of my greatest moments as a leader was when late in the semester when this student began explaining problems to other members in the group, rather than needing things explained to her.

Another situation I encountered was a student (or two) staying after the problem set was finished. These students would then pose questions from their quizzes and exams. Also, I received a large number of questions about pre-med life. Although my professor instinct yearned to help students with any situation, be it chemistry or life in general, this continual practice of post-session Q & A should not be encouraged. The solution for me was to answer the questions the best I could, but to emphasize that TAs and professor office hours were a much

better source of complete information that I utilized while in their position. I found this better than ignoring their questions completely or giving them an incomplete answer, which I felt would be highly detrimental if they chose not to address the question later with a professor or TA.

Your PLTL group is a work in progress. It will evolve throughout the semester, and much like a snowflake, no two groups are alike. Each is a combination of varying personalities and work ethics and you will have to adopt your own unique style based on the members of your group. There will be students who attempt to undermine and frustrate you; although a PLTL leader is definitely not faultless, remember that you are leading for a reason and that most situations are within your ability to deal. If situations occur that you are at wits end about, you have plethora resources to consult: PAM, old leaders during SAM, Dr. Frey, Dr. Hockings, and many more.

Something Will Go Wrong, But You Can Fix It!

by Jessica Lewis

By the time you are reading this, you have probably already had your first PLTL session. It may have gone perfectly, or it may have been very difficult, either way, you will probably run into difficulty with your group in the future. However, there are some situations that can be dealt with and can lead to more effective PLTL sessions in the future. However, it is most important to remember that you should never give up on your group, and you should always have the confidence that you can handle dilemmas that arise.

One problem that is fairly common in PLTL groups is the situation where most of the students are understanding and doing well on the problem set, but there are a few students who are not understanding and are holding the rest of the group back. One way to handle this situation is to remind the group that they should attend recitation and should do the homework sets before coming to PLTL. Sometimes students just need a reminder of what they should be doing to be prepared for PLTL. Another way of handling this situation is to make sure different students try explaining the concepts in different ways. Because people have different learning styles, the way a problem is being explained will have a large impact on a student's comprehension. However, if this does not work, it is sometimes necessary to tell a student that he or she should go to office hours to ask about the problem, and then you should move on. This should be used when too much time has been taken up on a problem that should be understood, and everyone else is getting held behind by just one or two people.

Another dilemma that could come up is when none of the students know how to solve a problem. It becomes difficult for the leader to not go into a "teacher" mode. Very rarely, it is necessary to teach a concept, such as when material is on the problem set that has not been fully covered yet in lecture. However, the large majority of the time, it is possible to solve this dilemma without teaching. One way to start is to have the students get out their books and notes and have the students look through them for a few minutes before trying the problem again. However, sometimes this will not help, and it then becomes necessary for you to have prepared for the material beforehand. When looking at the material, make sure you understand the reasons behind the answers, and try to come up with questions that you can ask your group to lead them to these reasons and answers. That way, you are not put on the spot in your group, and you can help guide them to the correct answer through your questions.

Another dilemma arises when a problem solving strategy just is not working for your group for a certain problem. In this case, do not be afraid to alter the strategy or even change to a different one completely. The most important aspect of the strategies is that your students are becoming better, more independent learners, and if this is not happening with a certain strategy then it should be changed. For example, if students are struggling with a round robin problem, you can make it “Millionaire” round robin and allow them to poll the audience or phone a friend. When students are more comfortable with a certain strategy, then they are more confident and more willing to participate. This leads to better involvement and more learning for the whole group.

Throughout the semester, there will be challenges in your PLTL session. Hopefully, these ideas will help you to deal with some of these difficult dilemmas and to get your group back on track. Hopefully, they will also give you the confidence that you need as a leader, and as you become more confident, you will be able to come up with your own ideas and become a more effective leader. Overall, everyone will learn, and that is what PLTL is about.

What to Do When...

by Ellyn Ranz

So you are a new PLTL leader, you're nervous, you're excited, and you just want to do a good job. Undoubtedly you will run into situations where you're stumped, and you don't know what to do. Obviously not everything will go perfectly, and you will most likely have problems with your group at some point during the semester. The key is to relax, because the more time you spend leading sessions, the more comfortable you will become, and consequently, the better you will be able to handle the different dilemmas facing you as a leader.

One of the biggest problems I faced as a leader was my group getting stuck on a problem. When nobody knew what to do, they would just sit there, and look at me. As a PLTL leader it is not your job to provide the solution, it is your job to facilitate an effective group learning environment. Because for many students this will be their first time in PLTL, it is your role to teach the group members what to do in such a situation. Usually to get things going, I would ask what concepts were covered in class that past week, and once the students were forced to recall them, they usually could see which would apply to the problem. If that didn't work, I then asked them to flip through their notes or textbooks to jog their memories. As a last resort, if the group was completely clueless, I would ask prompting questions about the problem, to get them to look at it a certain way, which then would cause them to see what they needed to do. Once the group gets in a groove, this becomes less of an issue, because the students learn to approach problems that they initially do not know how to solve.

Another situation that you might face with your group is having a student that does not work well with others. While you'd think that someone who works best by themselves would not sign up for PLTL, it does happen, and despite this fact, it is quite possible to facilitate an effective group dynamic. First you need to recognize that this student does not work well with the group. This is generally easy to spot, as the student will not discuss problems with other group members, easily becomes distracted and works off by himself, does not listen to the suggestions of others, etc. Next you need to recognize the fact that this student is most likely unaware of their behavior and how it negatively impacts the group. There are a few simple things that you can do as a leader to improve the situation, and keep this group member in check. For example, if another group member says something, and the prefers-to-work-alone student is not listening, you can ask them if they heard what the other group member said. This forces

them to listen to their peers, and facilitates better group communication. When it's this student's turn in Round Robin, and they write the answer on the board, but don't explain anything, you can ask them how they got there, which forces them to explain, which in turn opens the floor for discussion among the group. Additionally, when doing problems in pairs, it is imperative to pair this student with someone who is very vocal, and can work well with them. The key is not to get frustrated, and realize that everyone has different learning styles, which can easily be accommodated in the PLTL setting.

There are many more problems that your PLTL group may face, but all can be solved with a lot of patience and good communication. As long as you try to facilitate a positive group dynamic, the dilemmas will seem less daunting. The important thing to remember is that you can always discuss problems you're having in your group at the PAM and SAM sessions, and use your peers and professors as resources. Good Luck!

Student Dilemmas: Making Them Solve the Problem

by Laura Soderberg

So, this is probably how your PLTL story-arch will have progressed by the time you read this: you were moderately to desperately nervous about your first session, then actually went to your first session. All of the students were angels – pristine, perfect angels, all of whom refused to take the last cookie/brownie/vintage baked good from Bear’s Den for themselves. Now you have no fear of difficult dilemmas...because it seems like you’ll never have to run into problems with such nice people in your group.

That’s great; hold on to that feeling, even though it is partly a delusion. Of course, some weeks your group will get stuck on the first part of the first problem and some weeks they will be just a little sick of each other, but this doesn’t mean that they are somehow antisocial or that you have failed as a leader. It means that they have a big test the next day or that they flunked a quiz or something else entirely, so the first thing to do when your students are creating a difficult situation is remember that they really are still the nice, normal people who came the first week. From the day they arrived on the campus and stepped blinking into the Swamp, they have had to adjust to new pressures and, if they aren’t working well with the group, it is fairly likely that they are more trouble with the matter than usual. Or if no one in your group is focused or talking, it is might not be an issue with conflicting personalities; it could just be that none of them are willing to admit that they don’t know how to start the problem.

I would never suggest that personality conflicts do not emerge in PLTLs, but it can fairly difficult in practice to find out the real reason behind a student acting strangely. Most of us don’t, after all, have psychological training, so profiling is probably not the best option. This is a time when it can help you that all of the students in your group are rational, intelligent people, who can sometimes solve the problem themselves. Just asking the group why they aren’t talking is a surprisingly effective strategy, because they are certainly an authoritative source. If nothing else, answering will help restart the conversation.

Then again, occasionally, everyone is talking and trying, but they just are not able to get through the problem – no matter how many helpful questions you ask. There are two main reasons for this. First of all, they might need to switch up the problem-solving strategy, for instance if a problem you start as a round-robin turns out to require everyone’s input to solve. Relying on your experience to divine the precisely correct route won’t always work, and this

might be the time to ask your students if they think another strategy might work better. You don't always have to take their advice but even hearing it will give you a better picture of their position. The other common reason that group have trouble with problems, students having come to PLTL unprepared, is a little more awkward to address because there is the possibility that you will sound like you are a schoolteacher or that you will make someone who is doing the work feel bad. Emailing a general reminder can help, but asking if the homework covered the difficult material might get a faster response without sounding accusatory.

The dilemmas that arise in PLTL are so based in the individual group that the group's input can be an amazingly useful resource. They do, after all, have just as much reason to want a successful group as you do and, besides, anyone who refuses to eat the last cookie on the plate deserves some extra consideration.