

The Adventures of a First-Year LPA

Last summer, I took a class for high school physics teachers at Arizona State University. At one point, the instructors divided the students into geographical groups and told us to plan school year activities aimed at starting a number of Local Physics Alliances throughout Arizona. I was the only person from northeast Maricopa county, and thus was unanimously chosen to lead the group with the impressive name of Maricopa Area Physics Teachers' Alliance, Northeast Section, or MAPTA-NE. In the past year, I've learned a lot about starting and maintaining a group such as this, so here are some ideas to help others who are starting along the same path.

How to get the word out

The first challenge is to figure out everyone who should be invited to the meetings. Somehow, you need to reach all of the physics teachers in your area. A fairly complete list of schools and teachers is maintained by the Arizona section of the AAPT, so I started with that list and a map, checking off individuals who lived and/or worked in the area. I also got a couple of student aides into the act, calling local high schools and community colleges to find the names of current physics teachers (there was a large amount of turnover from the year-old list, much to my surprise). I also added teachers to the list who had attended previous graduate classes and workshops in my area, even if they lived and worked farther away. I wrote a letter describing the alliance and inviting all physics and physical science teachers to attend and then sent a copy to every physics teacher I'd found. I also included a map of my school location and the location of my classroom in the school. Every envelope was individually addressed, since a personally addressed letter seems so much more inviting than one simply addressed to "physics teacher." My school district was willing to cover the postage for 30 or so letters.

Our state also has a listserv for physics teachers, so I made sure that an announcement was posted there as well (in fact, as the year went along, that turned out to be the single most effective method of reaching people, and at quite a savings in postage). Student teachers from local universities were also invited through their cooperating teachers.

Ideally, a telephone tree would also be set up to remind/gently nag teachers about the meeting and to personally invite each teacher. Maybe next year...

Logistics

To determine the best time for the meetings, I took a mini-survey of seven or eight teachers who I thought were likely to get involved with an Alliance. I offered the possibilities of Saturday mornings, Saturday afternoons, school day afternoons or evenings, or all day Saturdays. The vote was pretty divided, but Saturday mornings were the most popular, so we've stuck with an 8:30 to 10:30 am schedule (though teachers have always stayed longer at the meetings to have a chance to discuss the issues we all face in physics).

I volunteered to host the first meeting and other teachers have hosted the subsequent ones. All that is really necessary for the location is to be relatively convenient for getting

there (fairly central is good), be able to have food and beverages, and be conducive to what's planned at the meeting. We've always held our meetings in physics classrooms, because our group is very lab oriented and wants to be trying things out...and we each want to see if we're really the messiest teacher in the state, or if everybody's desk is as piled high as ours! But for a meeting that's limited to sharing ideas on paper or discussing topics, there's no reason why a restaurant or even someone's home wouldn't work.

Food is important for the meetings, since eating and drinking tend to help folks relax and socialize. We were fortunate enough to get a small allowance from our state AAPT to pay for the goodies (\$20 per meeting covers it easily). I try to vary the menu, from coffee cake to bagels to doughnuts and fruit. Home baked treats are especially popular with the teachers, so I fire up the oven when I can. Coffee (lots of it!) and orange juice, with hot water for tea or cocoa rounds out the breakfast nicely.

The allowance we get from the state AAPT is funded by a drawing held at the state meetings. If a food allowance from a source like this isn't possible, consider going "potluck," taking turns, asking the host school to provide some funding or food, or writing a "mini-grant" for a local source of funds. Don't let one person get stuck with always providing the food, or they'll burn out pretty quickly. Also, the host shouldn't have to provide everything, since they're also busy getting the room ready, putting up signs, and getting the coffee going.

Choosing Topics

I brainstormed ideas for effective meetings with some of the other leaders of the newly-formed LPA's in the area. We chose a happy hour before the start of the school year for our brainstorming session, but email or conference calling could also be good ways to share ideas. From those possibilities, I chose the main topic for our first meeting, which was lab practicals. At that meeting, I reserved about 40 minutes to plan for the future, and asked the participants for more ideas. There were LOTS!! In fact, the hardest part was keeping the discussion to future topics—everyone wanted to discuss them all immediately.

Some of our ideas that other LPA's may also find interesting and useful include:

- make and takes
- simple labs to share (string and sticky tape types, especially)
- computer data collection--MBL
- calculator based labs--CBL
- spreadsheet use for data analysis
- demonstrations show and tell
- mystery equipment identification

- projects
- lab reports and other lab evaluations
- learning cycles
- specific curricula such as Modeling, Comprehensive Conceptual Curriculum for Physics, PRISMS, and CPU, and
- how to schedule the year in physics.

We've also discussed state and national science standards, budget concerns, organizational memberships, and organizing carpools for state meetings. It's important to look to the expertise in the group to encourage sharing, as well as to occasionally invite in some outside experts (such as curriculum trainers) who have different talents and information to share.

Keeping it Going

These meetings have to be good enough to get busy physics teachers to give up precious free time to attend. They have to be willing to leave the family, the housework, the paper grading, and all the other demands on their time to go learn some physics. So the meetings simply **MUST** be relevant to the needs of the local teachers, as well as convenient in terms of location and time. In our group, there is a good mix of teaching background, with about two thirds experienced teachers and one third new teachers with less than 3 years experience. The new teachers find the meetings very helpful, and tend to get that sponge look as they try to absorb every bit of information they can. The teachers who've been around a while enjoy sharing labs they're particularly proud of and slick tricks they've learned over the years. We also do our best to "steal" the best of everyone else's physics repertoire.

The bottom line, though, is that the meetings have to result in improvement in the classroom. There must be benefits to our students' learning and to our professional satisfaction, or there is no point in having an alliance. We need to learn things that have direct, preferably immediate, classroom impact. Choose topics with that in mind-- schedule topics for the appropriate time of year and at the appropriate level for the teachers involved.

One thing to avoid is the general complaint session. All districts, all schools, all departments, and all classrooms have problems. It is easy to fall into the rut of looking at the negatives of our situations, but that is not very conducive to change or improvement-- it just fosters a rotten attitude. During our discussions, when teachers point out problems at their schools, I try to lead the discussion toward finding specific solutions to specific problems. Finding the bright side is not always possible, but a creative group can almost always find ways to improve the situation, no matter how bad it seems at first. Our group has developed into a network that shares equipment, calls each other when labs don't work, emails when kids just aren't "getting it" and we can't think of another way to approach a problem, and meets for happy hour when someone needs a boost. Becoming a cadre of physics teaching professionals is a worthwhile goal for an LPA!

Requirements for the Organizer, or What are You Getting Yourself Into??

The responsibilities of the organizer are relatively few: to inform teachers about upcoming meetings, to organize the meeting site, agenda, and amenities such as food, to report out to the larger group of physics teachers (in our case, through the state listserv) what happened at the meeting, and to do follow-up communications.

The first mailing was a very time-intensive project, with most of the hours spent on identifying the teachers who needed invitations. Subsequent communications have been more automated and thus far easier. The agenda pretty well takes care of itself after the first meeting, since there are usually lots of suggestions from which to choose. Food can be as easy or as complex as the group wants.

I was rather surprised at the amount of follow-up I ended up doing after every meeting. Each time I sent out the minutes of the meeting, I'd get requests from teachers in other parts of the state for copies of the handouts, notes, and email addresses of all of the presenters. I now make sure I pick up all of the extra handouts, since I usually need every one! It is terrific, though, that some of the people I first "meet" through this sharing end up attending LPA meetings in their own area, or dropping into one of ours.

Closing Thoughts

Starting and continuing an LPA has been a lot of work this year, but I've also greatly enjoyed the camaraderie and the professional stimulation of meeting regularly with a like-minded group of teachers. At our final meeting of the 98-99 school year, we planned carpooling for the upcoming state meeting (two hours away) and scheduled our first meeting for the next school year, so it looks like my cohorts also find this a worthwhile activity. The work is paying off, and I hope we can keep this LPA going for a long time to come!