

Spring , 2022

Issue 50



## Long Island Physics Teachers Association Newsletter



### Important Dates

<b>AP Test Analysis</b>	<b>Wed May 25</b>
<b>Regents Physics Exam</b>	<b>Thurs Jun 23</b>
<b>End of year BBQ</b>	<b>Tues Jun 28</b>

Check the  
LIPTA website  
[www.lipta.org](http://www.lipta.org)  
for any updated  
information.

### President's Message

It's almost summertime and time for some light R&R. Resting and Reflecting and Relaxing and Recuperating, if those fit into your summer plans.

You know how to Relax. Personally, I binge-read for two days straight, to make up for not having read nearly enough in the past year. I love a well-written novel. Maybe this year I'll mix it up and will also binge-watch some series that I've been hoping to see. Do you have any recommendations?

How about Reflecting on the past couple of years? COVID years have been so different from previous years. Are there new practices, policies, and activities that you tried with your students? I'm sure some new activities worked well and others not so well, and now is a great time to make a conscious decision about what to keep and what to toss.

How about your balance of content, study skills, and social-emotional support? This year did you use the same balance that you used two years ago? My balance has changed. This year I covered the same content, though a little slower, and I spent more time on metacognitive strategies. It has taken a while, but I have finally realized that it is also important to address the social-emotional side of my students, or at least to acknowledge that my students need support in this area. Going forward I will try to keep a healthy respect for my students' need for social-emotional support.

In terms of metacognitive strategies, which I often refer to as study skills, I am still coming to grips with my students' lower mastery in this area. Everybody seems to have been impacted by COVID, and one thing that my students lost was two years of training in metacognition. So while my current students are bright, eager, and very nice (these are some of the nicest kids I've worked with), they don't seem to have had a progression of learning metacognitive strategies, and they also don't realize that this is an area of deficiency. I will definitely be keeping scaffolding and some activities that help my students learn some metacognitive strategies, and I hope to nudge them towards what I would have expected from students a few years ago. Who knows? Maybe they will learn to learn for themselves.

Predictions are that next year will be impacted by COVID too. Fortunately each of us, in our own ways, have learned a lot from the past two

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years; things that we can take with us into next year. Whether you are a veteran teacher, a newbie, or anywhere in between, you have found and developed strategies to help your students. In my case, I will spend more time next year with strategies designed to improve my students' metacognition, and I hope to remember to acknowledge their need for social-emotional support.

What will your Reflection tell you?



**Do you know WordPress?  
Then LIPTA needs you!**

**We at LIPTA want to update our LIPTA website, and we plan to use WordPress. If you know any WordPress (or are willing to learn), you could help. We want to keep all of the features of our existing website while making the new site more mobile-device-friendly. If you will have some free time this summer and you think you could help, please contact Gillian Winters at [winters@lipta.org](mailto:winters@lipta.org).**

**Do you have any comments, information, or tips to share for future newsletters? Send it via email to: [keogh@lipta.org](mailto:keogh@lipta.org)**

# LIPTA SPRING CONFERENCE

by Joanne Schwager

What another great conference by LIPTA! For the meet and greet, there was a fantastic assortment of breakfast pastries made by our Treasurer and “resident chef,” Tania Entwistle. From 8:30 to 9:00 we all had a chance to talk to one another while being surrounded by colorful student posters adorning all of the surrounding walls in a double sized classroom at Syosset HS. LIPTA President, Dr. Gillian Winters, gave us a brief introduction and said that the feedback received from the Fall conference was that teachers wanted more time to talk to each other, and our wish was granted.

Syosset teachers, Richard Slesinski and Nicole Kelly, had us form random groups by handing out “Free body diagram” cards and “Description of motion” cards in a 1 to 3 ratio which allowed new group formations that became our “family.” The family’s first assignment was a social skill warmup. The idea was for each family member to become an expert at one of the 4 poster areas along with other experts from different families and then return to their family and teach the idea to their group. No phones were allowed. Students took notes with a pen and there was a time buffer for the students who came back to their group early. Then each member presented their lesson just learned, followed by a quiz and the most important key was the reflection at the end.



Teachers working with their “families”

During the question and answer session, Dr. Winters asked Rich Slesinski about how his teaching has changed. He said that instead of perfectly unfolding lessons for students, students are responsible for their own learning by teaching to their peers. Rich put all of his lessons, expert boards, and student work into a google drive and shared the drive with a link through a QR code.



Bill Leacock demonstrating the Make-and-Take, a Bi-color LED spinner.

The next part of the day was a Make-and-Take by Bill Leacock which was a Bi-color LED spinner. When we entered the lab room all of the materials were set up for us including a beautiful set of instructions in color with step-by-step directions. All the parts were aligned perfectly on the teacher’s table, and the tools, including soldering irons, were plugged in. Along with making the spinner, we were given an extra battery and LED that showed on one side a green light and by flipping the LED over the color changed to red depending on whether the longer or shorter side of the 2 prongs was on the positive or negative pole of the battery.

In conclusion, the day was successful in both educational theory and technical learning.

The frequency of physics homework hertz.

Studying radioactivity is as easy as alpha, beta and gamma.

# PHYSICS OLYMPICS 2022

The 36th Annual Physics Olympics finally took place on Friday, March 18th at Smithtown East HS after a two year postponement due to Covid. The events originally scheduled for March, 2020 were the same ones scheduled for this year's competition which was headed by Justin King. Though there were fewer teams than usual, nine teams still had the chance to compete in the five events.

The Fermi Quiz was won by MacArthur HS which also took the top trophy for the Laser Light Show event. This year, the teams had to figure out how to place two plane mirrors so that a laser beam that was refracted through a prism so that the beam hit a pre-determined target location. MacArthur was only 1 millimeter off from the target! The Slow Roller was won by Manhasset. In this event teams had to determine where two rolling cylinders of different speeds would meet up.



Smithtown East working on Fermi questions.



Valley Stream North throwing paper airplanes in Aerial Accuracy event.

Aerial Accuracy was a construction event where teams were allowed to create up to three paper airplanes using a full sheet of paper and one paper clip (if desired). They received three sheets of paper to try different designs and had time to practice. Each team chose one plane for competition to fly for three trials with a different team member throwing each time. The best throw counted. The score was determined by measuring the distance from the start line to the landing point and subtracting the perpendicular distance from a center target line. Hence, accuracy mattered and the better scores went to those who were able to keep the plane close to

the center line. East Islip took top honors there. Syosset won the challenging Physics Bowl event.

Overall winner for the competition was MacArthur with 36 points out of a possible 45. Though Syosset and East Islip tied with 31 points, Syosset was awarded second place since it had more points in the Physics Bowl than East Islip which took third place. And the fourth place trophy was awarded to Division Avenue with 24 points.

Most teams came decked out in Physics co T-shirts. The T-shirt certificate for best T-shirt was awarded to Smithtown East with their very clever and pertinent, *Trajectory of Gas Prices* graphic design. For more pictures of the teams and events, see the LIPTA website.

Thanks to all the teachers who helped to judge the events and Bill Leacock for tallying the scores. And thanks to Tania Entwistle for supplying all the food and ordering plenty of pizza for everyone. Hope to see more teams competing next year!



Overall winning team, MacArthur HS.

## Fifty Newsletters!

When I started to put this newsletter together, I was shocked to see that it was the 50th issue. And more surprised to see that I still had a copy of the 1st edition that I did back in the Spring of 2005 nearly 17 years ago! Now 17 seems to be a very special number for me. I taught for 17 years at Freeport HS (1983-2000) and another 17 years at Manhasset HS (2000-2017). And I look fondly back on those times and at completing 17 years as the LIPTA newsletter editor (No, Gillian, do not worry I am not retiring from that position yet!)

When I put the first newsletter together, I was literally winging it. I had no clue how to use Publisher and I had to xerox the newsletter in piecemeal, collate it and staple it all with the help of my wonderful husband who also went to the post office to get stamps to mail them out. Now it's a bit easier to put together and to send the newsletter out online. But the hard part is still getting articles and I am always open to anyone who would like to write something to share with our members.

When I looked back at the first newsletter, I saw some things haven't changed too much. Ed McDaniels, the LIPTA President, wrote an article imploring people to help out with the organization. We can still use help. Tania Entwistle had an article about the very interesting LIPTA conference which was held at Brookhaven National Lab that year. Bill Leacock had an article about setting the standards for the Physics Regents course. And there was a plug for the AP Physics analysis which was still taking place at the BOCES center.

I also had a lighthearted article about my jury duty service which I reprinted below. The uncanny thing is that I am now serving as foreperson for Federal Grand jury in Brooklyn every Friday until the end of July. Since I am no longer teaching, I must admit it is a very interesting experience and I am glad to have the opportunity to do my civil service and not have it interfere with my teaching responsibilities.

Now I doubt I will make it to the 100th newsletter, so think about whether you might like to take over as the Editor in the future. It allows you to be a bit creative and work with some wonderful people.

### *It's All About Who We Teach*

By Terese Keogh

*(reprinted from Issue 1, Spring 2005)*

*Recently, I had the "pleasure" of serving jury duty. My school district discourages its teachers from using school time for this purpose; consequently, I spent part of my February break in a Nassau County court. If you have ever served jury duty, you have probably experienced the large amounts of wait time. Fortunately, I had plenty of lab reports to grade in order to keep me busy and I managed to grade several sets of them until I was finally called as a prospective juror.*

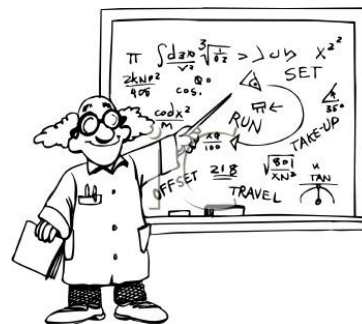
*The case that I could have participated in would have required at least three weeks of my time and as a physics teacher this would be a major inconvenience for my students and me. So, I went before the judge to be released from this particular case. The judge was hardly a pleasant woman who was not willing to discharge many of the jurors. She seemed surprised to hear that it would be difficult to find a physics teacher to substitute for me. She finally agreed to let me go but not before she gave me this parting comment, "You can go if you would rather spend your time with teenagers!" My immediate thought was that I would rather be with them than with an alleged murderer, but I just replied, "That's my job."*

*It was on my walk back to the jury room that I really thought about what the judge said and realized that one reason that I am a high school physics teacher is because I actually do like teaching teenagers. I have spent over twenty years working with them and most of them have been a pleasure to get to know. Oh yeah, there are exceptions, and trying to teach teenagers physics can be an extremely frustrating experience at times. But, it certainly is never boring, as most of you will agree.*

*To be a good physics teacher, you obviously must possess a good working knowledge of the subject and how to impart that onto your students, but this can be for naught if you do not develop a good relationship with them. This usually requires mutual respect and appreciation. Teenagers, as any parent or high school teacher will tell you, can be a difficult group to deal with. But when you like them, they usually return that feeling and may be more amenable to learning physics.*

*So, Judge, I will gladly return to my classroom and finish out this year teaching one group of teenagers and greet a whole new group of them in September. I would rather be with them!*

AP Physics Exam Analysis  
 Western Suffolk Boces  
 507 Deer Park Road, Dix Hills  
 Wed, May 25  
 7 PM to 9 PM



Solutions to the following exams will be available.

AP 1 by Joe Rodichok

AP 2 by Rob Krakehl

AP C (Mech and E &M) by Rich Slesinski

IB Physics by Justin King

There won't be time to go over every test, but we will discuss the tests that are of the most interest to the attendees.

***Save the  
date***

**LIPTA End-of-Year BBQ**  
**Tuesday, June 28**  
 Free for members

**Details and registration information will be coming  
in June.**

**Do You Need Professional-hour credits?**

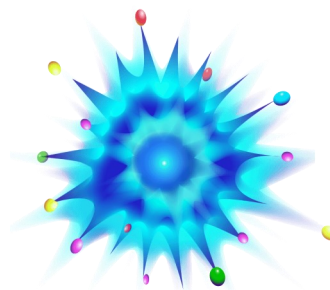
- ⇒ Attend the Fall and Spring Conferences (3 credit hours for each conference)
- ⇒ Attend the AP Physics Exam Analysis (2 credit hours)

CTLE Certificates are available.

## Summer Professional Development with QuarkNet

This year's QuarkNet workshop will be 4 days, and will include working with cosmic ray detectors (appropriate for student use), analyzing real data, modern physics activities for the classroom, and a tour at Brookhaven National Lab (BNL).

- June 27 - 30, 9:00 am - 4:00 pm (early release on Tuesday for the LIPTA BBQ!)
- Mon-Wed at Stony Brook University. Thursday at BNL
- 28 CTLE credit hours for 4 days of PD
- No cost to you
- We generally receive a small stipend for attending



QuarkNet is an outreach program of FermiLab. Programs are provided by physicists from FermiLab, Stony Brook University, and BNL, and participants work together to learn and create, with the hope that some of the activities will be used in the classroom.

Interested in joining us this year? Contact Gillian Winters at [winters@lipta.org](mailto:winters@lipta.org)

