

Alliance For Physics Excellence (APEX) Spring Weekend Follow-Up Workshop – Cohort 3 Physics Teacher Institute (PTI) Physical Optics Activities Schedule Alabama A & M University & The University of Alabama in Huntsville



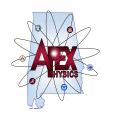
March 23 – 24, 2018

Day 1 - Friday, March 23, 2018

8:00 – 8:15 AM		Welcome/Greetings/Coffee	Mohan Aggarwal AA&MU and
		Announcements	APEX Leadership Team
8:15 – 10:30 AM		Physical Optics #2A: DOUBLE SLITS —Page 21 - Ripple Tank Part	Jane & Jim Nelson AAPT/PTRA (2 & 1/4 hours
		Done Last Summer) (Observe & Explain #3, 6, and 7 pages 22 & 23)	
		Physical Optics #1: SINGLE SLIT - Page 9 (Observe and Explain #3,	
		5, 6 and, 8 pages 10 and 11)	
		Physical Optics #3: MULTIPLE SLITS (Observe & Explain - Page 33 #2)	
		Physical Optics #4: SINGLE & DOUBLE SLIT QUESTIONS (Odd Tables Single Slit Problems & Even 2-Slits Problems) - Page 41& 42 #1 to 5	
10:30 - Noon		Physical Optics #5A and/or 5B: WAVELENGTH OF LIGHT Page 51 and Page 55	Jane & Jim Nelson AAPT/PTRA (1 & 1/2 hour)
Noon – 1:00 PM	In House Working Lunch: Start Physical Optics #16: POLORIZED LIGHT AND POLORIOD FILTERS - Page 155		
1:00 – 2:30 PM		Physical Optics #6: CD GROVE SPACING – Page 63	Jane & Jim Nelson AAPT/PTRA (1 & 1/2 hours)
2:30 – 2:45 PM		Physical Optics #7: Hair's Diameter (Discussion Only) – Page 73	Jane & Jim Nelson AAPT/PTRA (1/4 hour)
2:45 – 4:30 PM		Physical Optics #8: The Photoelectric Effect A Simulation – Page 81	Jane & Jim Nelson AAPT/PTRA (1 & 1/4 hour)
4:30 – 6:00 PM		Physical Optics #9: LED AND PLANCK'S CONSTANT – Page 99	Jane & Jim Nelson AAPT/PTRA (1 1/2 hour)
6:00 - 6:30 PM		Eelicitation	Jim Minstrell Facet Innovations (1/2 hour)
6:30 PM	Dinner (On Your Own)		

- Day 1 (Total = $9 \frac{1}{4}$ hours)
- $\overline{AAPT/PTRA} = 83/4$ hours
- Action Research, et cetera = 0 hours

- Pedagogy = 1/2 hours
- Technology = 0 hour



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March 23 - 24, 2018

Day 2 – Saturday, March 24, 2018

8:00 to 9:00 AM	☐ Instruction to address student thinking	Jim Minstrell Facet Innovations (1 hour)
9:00 to 10:30 AM	Physical Optics #13: ATOMIC SPECTRA OF UNKNOWN – Page 141	Jane & Jim Nelson AAPT/PTRA (1 1/2 hours)
10:30 AM to 11:45 AM	Physical Optics #10: BUBBLE & THIN FILMS COLORS – Page 111	Jane & Jim Nelson AAPT/PTRA (1 1/4 hours)
11:45 to Noon	☐ Discuss Dual Nature of Light - Page 121	Jane & Jim Nelson AAPT/PTRA (1/4 hour)
Noon - 1:00 PM	In House Working Lunch: (60 minutes) Continue Physical Optics #16: Polorized Light and Poloriod Filters- Page 157	
1:00 – 2:00 PM	So, you reformed your classroom physics class. Will it last?	Dennis Sunal APEX Project Co-PI and UA-APEX Director (1 hour)
2:00 – 2:15 PM	☐ Horizon Survey and Wrap-up	Mohan Aggarwal AA&MU, HRI and APEX Leadership (1/4 hour)

- Day 1 (Total = 9 & 1/4 hours)
- **AAPT/PTRA** = **8 & 3/4 hours**
- Action Research, et cetera. = 0 hours
- Pedagogy = 1/2 hour
- Technology = 0 hour
- Overall Totals = 14 & 1/4 hours
- AAPT/PTRA =11 & 3/4 hours
- Action Research, et cetera = 1 hours
- **Pedagogy = 1 & 1/2 hours**
- Technology = 0 hour

- Day 2 (Total = 5 hours)
- AAPT/PTRA = 3 hours
- Action Research, et cetera = 1 hour
- Pedagogy = 1 hour
- Technology = 0 hour