



American Association of Physics Teachers Physics Teaching Resource Agents

PTRAs are master physics teachers who are committed to working with other adult educators to enhance their content and pedagogical techniques in the classroom. Classroom teachers who wish to become a PTRA must submit an application. The basis of acceptance has traditionally been based on the following criteria:

- A minimum of five years of classroom experience at the high school level in physics. The experience is necessary to experience personal growth in the understanding and teaching of physics and in order to be respected and valued by their peers with whom they are working and to be able to contribute to the PTRA and physics community.
- Involvement in AAPT either at the national level or the state level, preferably both. The affiliation with AAPT is appropriate since PTRA is a program under AAPT. Applicants are sought via recommendations from active PTRA or are solicited via advertisements in AAPT publications.
- Demonstration of a commitment to peer professional development and continued personal professional growth
- Letter of support from school administration indicating that the applicant is well respected within the school and district and will receive appropriate support to run workshops.

In order to be considered an active PTRA, one must

- Attend and be actively engaged in the summer leadership institute. The expectation is that they attend a minimum of one institute every other year unless there is some type of medical situation or emergency.
- Instruct a workshop/institute at least once every 2-3 years. In the current “non grant” state, this means the PTRA must seek opportunities to provide these services. If no large workshops can be arranged, the PTRA is expected to provide workshops for section meetings, even if there is no fee associated with the workshop.
- Provide a workshop that contributes to the PTRA Continuation Fund. The only exception to this is if the workshop is supporting an AAPT section meeting. This means that a portion of the monies paid to the workshop leader must be sent to AAPT/PTRA at the conclusion of the workshop along with the appropriate information on the workshop topic, number of participants, and location.
- Seek opportunities to provide professional development for peers at the local, state, or national level

Workshops/institutes are provided for teachers of grades K-12 and on any relevant topic (including apps for the classroom, PER, technology, engineering, content). The length of the workshop/institute is dependent on the situation with a minimum of usually 3 hours and extending up to over 100 hours over the course of a year. In order to maintain quality and be effective, the workshop leader must have been trained/certified in the particular topic(s) being presented at a workshop. Traditionally this was usually accomplished by attending a workshop at the leadership institute. If this was not possible, the PTRA could serve in an apprentice role while working with certified PTRA offering the workshop. Strategies for working with adults and peers are provided at the leadership institutes in addition to content, use of technology, pedagogical strategies, and physics education research.

Prepared by KJ Matsler (PTRA Director), July 2015. Reviewed and edited by Pat Callahan (Oversight committee chair), Jan Mader and George Amann (Rural PTRA Co-PIs)

Characteristics of a PTRA workshop include:

1. Led by a certified PTRA. Certified implies that the PTRA can lead a workshop on a given topic as a result of successfully completing the summer institute on the given topic. Some active PTRAs may not have attended particular workshops to obtain certification, but may become certified by serving as an apprentice during a workshop with certified PTRA.
2. Advertised to the physics community via social media or other appropriate means
3. Use of materials developed by PTRA as appropriate
4. Fee for services, some of which is deposited in the PTRA continuation fund. This fund is used to fund leadership institutes, develop/modify workshop resources, and provide support for sites needing start up money or resources. Fees for workshops vary depending on the source of the funding. Funding sources include grant monies from the federal, state, and local entities or the fees may be paid for by the participant. Workshops given at section meetings are usually done for a minimal fee, which typically covers the cost of materials and little to no stipend for the PTRA or contribution to the fund. These “mini” sessions are typically 1-2 hours and are given to support the section meetings and general AAPT population.
5. Completion of an evaluation or survey, which is to be submitted to the PTRA director
6. Incorporation of appropriate materials from corporate sponsors such as PASCO, Vernier Software, Texas Instruments, and Perimeter Institute when appropriate.

PTRA leadership provides support for workshops by:

- Assisting with advertising and recruiting for the workshops
- Requesting materials from corporate supporters (as appropriate) such as TIPERs, Ranking Tasks, and Video Physics.
- Providing monetary support when requested, approved, and appropriate. The PTRA stipend will depend on the length of the workshop and the funding available. The target is to pay an experienced and certified PTRA \$400-\$500 for a 7-8 hour day. A new or inexperienced PTRA will usually receive \$350-\$300 for a 7-8 hour day. Often this fee does not include any meals or travel expenses.
- Assisting in pairing PTRAs with university and two year colleges seeking to provide professional development to community members.