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## ADOPT-A-PHYSICIST TEACHER'S GUIDE

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We are excited that you and your class are participating in Adopt-a-Physicist this year! This guide includes suggestions and ideas to help you execute this project in your classroom.

### LOGISTICS

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#### FALL 2009 SCHEDULE

- Registration: September 8 - September 23 (or until full)
- Teachers adopt physicists: September 29 - October 7
- Discussion forums open: October 12 - October 30

#### REGISTRATION AND SET UP

You can register your class for the Adopt-a-Physicist Fall 2009 Session between September 8<sup>th</sup> and September 23, 2009. After you register, you will be prompted to set up your classes. You must set up an account for each of your participating classes before September 23<sup>rd</sup>.

#### CHOOSING YOUR PHYSICISTS

Choosing physicists may be one of the most exciting and interesting parts to *you* in this project. This will take place after you register but before the three week discussion period begins, from September 29 – October 7. **You must complete this process in order to participate in Adopt-a-Physicist. If you register but do not choose your physicists, you will have to wait until the next Adopt-a-Physicist session to participate.**

Login to Adopt-a-Physicist anytime between September 29<sup>th</sup> and October 7<sup>th</sup> and you will be prompted to choose your physicists. If you are unable to choose your physicists during this time but would still like to participate in the fall 2009 session, you must email [editor@adoptaphysicist.org](mailto:editor@adoptaphysicist.org) before October 7<sup>th</sup>.

Each physicist can only be “adopted” three times, therefore the sooner you search for physicists the more options you will have.

When it is time for you to choose your physicist, you will be directed to a search page that allows you to browse the profiles of available physicists according to a category (employer, job, minority status, degree, or place of residence) or randomly. You can view a physicist's profile by clicking on his or her name in the search results.

## Adopt-a-Physicist Fall 2007 Directory

### Search for a Physicist

Use the fields below to search for a physicist or [view a random sample of available physicists](#). Click on a physicist's name to view his or her profile.

Once you have found a physicist you would like to add, click on "Adopt this Physicist" at the top of his or her profile.

State:


Degree:

Employer:

Current Job:

Minority Status:

### Physicists

User Profile	Organization	Picture	Forum
<a href="#">Kendra</a>	American Physical Society (APS)		

If he or she is still available for "adoption", there will be an "adopt this physicist" option at the top of his or her profile, as shown below.

### Kendra's Profile

- » [Edit My Profile](#)
- » [Edit My Account Settings](#)
- » [Edit My Career Information](#)
- » [View My Classes](#)

[Adopt this physicist](#) for your Test1 class.

### Physicist

**Kendra Rand**  
One Physics Ellipse  
College Park, MD 20740



### Class

Adopt-a-Physicist Fall 2007: [Test1](#)

### Minority Status

Female

### Biography

I moved to the Washington DC area just over a year ago to work for the American Physical Society in their public outreach department. It was quite a change from the

The physicists in this program work for colleges and universities, hospitals, non-profit organizations, industries, private and government funded labs, and other organizations. There are physicists working in computer programming, engineering, science research, teaching, management, and many other fields. There are male and female physicists, and physicists of different ethnicities. There are bachelors and masters degree physicists as well as PhD physicists.

Choosing a group of physicists representing a variety of fields and backgrounds will not only expose students to the many opportunities that studying physics yields, but will also show them that people with all different backgrounds can be successful in physics.

## **DISCUSSION FORUMS**

When you “adopt” a physicist you will have access to his or her email address. Please email your physicists to introduce yourself and your class before the forums open, and let them know how you plan to implement the project in your class. The physicists you adopt will also receive your email address.

**Do not give the physicists’ email addresses to your students. Your students should communicate with their physicists only through the discussion forums.**

Your discussion forums will be open October 12-30. During this time your students will be able to login to the Adopt-a-Physicist website (using the pin you create during registration) and read and post on the discussion forums hosted by their adopted physicists. Specific posting guidelines are given in the ADOPT-A-PHYSICIST STUDENT GUIDE. Students will also be able to browse all of the participating physicists’ profiles and read but not post on the other discussion forums.

Each forum will be shared with 1-2 classes from other schools. These discussions are meant to be interactive – students can address posts to the students at other schools in their forum, each other, and to the physicist host. Encourage your students to communicate with the other students as well as the physicist.

You will not be able to tell which of your students posted which comments on the discussion forum unless you ask students to include their first name or initials within the post. Each post will automatically include the class name you created when you set up your class.

Classes are expected to participate in their discussion forums throughout the entire three week period – not necessarily on a daily basis, but at least a few times each week. Feel free to post on the forum and help get the conversation started.

After the three-week session is over, students will no longer be able to post on the discussion forum. If you would like to stay in touch with your physicists you must arrange that independently with the physicist. **The Adopt-a-Physicist program and its organizers take no responsibility for contact beyond the three week discussion period.**

## MONITORING DISCUSSION FORUMS

By registering for this program you are committing to monitor the discussion forums in which your students are participating.

Please be aware of the following potential issues and their solutions:

- If your students post comments that you would like to be deleted from the forum, you can delete them or notify the editor, [editor@adoptaphysicist.org](mailto:editor@adoptaphysicist.org).
- If one of your physicists does not respond to posts in a timely manner, please email [editor@adoptaphysicist.org](mailto:editor@adoptaphysicist.org). The editors will contact the physicist and, if necessary, supply you with an additional physicist. Keep in mind that the physicists are not required to check the forum on a daily basis; however, they should be checking posts and responding at least once every 2-3 days.
- Some of your physicists may use scientific jargon that is above the level of your students. If this is the case, encourage your students to be inquisitive and ask their physicist to better explain the terms or ideas. You can also email the physicist and discuss your concerns with him or her.
- If controversial topics (religion, politics, etc.) are discussed on one of your forums, you might encourage students to investigate different sides of the issue by reading other discussions and talking with others.
- If a physicist promotes ideas that you feel are inappropriate, please send an email to [editor@adoptaphysicist.org](mailto:editor@adoptaphysicist.org).

The Adopt-a-Physicist editors will be monitoring the forums and have the right to delete posts and block classes from posting.

**The discussion board messages express the views of the author of the message, not necessarily the views of Adopt-a-Physicist or its editorial staff, or any entity associated with it.**

## **ADOPT-A-PHYSICIST IN THE CLASSROOM**

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### **FINAL PROJECT IDEAS**

In order for students to get the most from Adopt-a-Physicist, we suggest dividing them into groups, pairing each group with a physicist, and having the groups report what they learned to the rest of the class. Here are some ways they might do that:

- Have each group put together a PowerPoint presentation on their physicist and his or her employer. This will enable students to take advantage of the many visuals available online and share with the entire class what they learned. If time permits, you might give an example presentation on a physicist (yourself, a colleague, family member, or friend) to your class. This will not only provide students with a framework for what they are expected to do, but also get students excited to learn more about what physicists actually do.
- Have each group submit a written report on their physicist. Then, compile these reports and distribute them to the entire class. This way all of the students will learn about all of the physicists (and hopefully see the variety of things that physicists do), but no class time will be devoted to presentations.
- If you are looking for a more informal way to implement the project in your classroom, you may want to simply set aside some class time for students to correspond with the physicists over the three week period. Then, at the end of the session, lead a class discussion on the physicists, their work, and their backgrounds. Encourage students to think about how their perspective on what a physicist does has changed.
- As a class, discuss what a physicist “looks like”. Then divide students into groups and have each group interact with one physicist. After the discussion forums close, revisit this discussion. You might have students create a collage or poster that answers the question “What does a physicist look like?” before and after the discussion forum. How are the two similar and different?
- Another option is to present the project as an extra credit opportunity in your class. Depending on how many students show interest, you can assign physicists to groups or individual students. Students may then have the option of giving a presentation on their physicist or producing a written report.

**However you implement Adopt-a-Physicist, please email your “adopted” physicists before the program begins and let them know what you expect from your students.**

## CREATING GROUPS

On the day that you plan to assign physicists to student groups, pass out the physicists' profiles and give students time to read them. Then, arrange the students into groups. Some suggestions for how to do this are listed below.

- Send around the CLASS GROUPS form that lists the physicists you have chosen. Then let students sign-up for the physicist that interests them.
- Have each student write their first, second, and third choice physicist on a piece of paper. You can then use the papers to assess student interest, and assign the groups and corresponding physicists on your own time.
- Have students choose groups and then allow groups to verbally announce which physicist they are interested in, as you form groups on the board.

Alternately, you could have students count off or choose groups, and then randomly assign a physicist to each group.

## PROJECT OVERVIEW

On the day that you present the project to your class, hand out PROJECT GUIDELINES and SUGGESTED DISCUSSION TOPICS.

These handouts can be downloaded from [www.adoptaphysicist.org](http://www.adoptaphysicist.org) and edited as needed. Whether you decide to use the handouts just as they are, change a few things, or make your own handouts, a few important items to touch on are the following:

- How much computer time will students have in the classroom? No matter how little time you can afford to give them, making it clear from the start will lessen the complaints later on!
- How do you plan to grade their experience? Do you want students to create a presentation or report? What should it include? (See the "Final Project Ideas" section for suggestions). Share the rubric you plan to use with the class. You may use the one included in the PROJECT GUIDELINES if desired.
- What are your expectations in terms of the *quantity* of correspondence with their physicists? Does everyone in the group need to correspond with their physicist? If so, are they required to include their name or initials in each entry so you can check on this? Are there a certain number of questions you expect each group to ask their physicist?
- What are your expectations in terms of the *quality* of correspondence with their physicists? How thoughtful and in-depth do you want their questions and/or responses to be?
- Does each group member need a leadership role in the project? If so, what are those leadership roles? Are students required to indicate in their presentation which group member had which leadership role?

Students will quickly see that this project is outside the “norm” of the classroom, and may not take it seriously. If you make it clear that even though this assignment is different than typical labs and tests it is just as valuable, you are likely to have a better outcome. Also, you may want to emphasize the point value of the assignment and compare it to the values of labs and tests.

The most important thing is to get your class excited about communicating with their physicists! This is a unique and valuable experience. If you are enthusiastic and excited about the project, your kids will be too!!

## **USING THE FORUMS**

If possible, set aside a full class period for getting your students acquainted with the discussion forums. This will be most efficient if each group has access to a computer. Each student should receive a copy of the USER’S GUIDE.

You may want to navigate your students through the site, let them search through it themselves, or both. Also, you may want to instruct students to use some of this time to introduce themselves to their physicists and ask a few general questions.

## **CERTIFICATE OF PARTICIPATION**

Your class will receive a certificate of participation at the end of this session. We hope that you will hang it with pride in your classroom, and consider participating again next year!

## **ABOUT SIGMA PI SIGMA ( $\Sigma\Pi\Sigma$ )**

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Sigma Pi Sigma exists to honor outstanding scholarship in physics; to encourage interest in physics among students at all levels; to promote an attitude of service of its members towards their fellow students, colleagues, and the public; to provide a fellowship of persons who have excelled in physics. Sigma Pi Sigma’s mission is not completed in the induction ceremony with the recognition of academic accomplishment. In the four dimensions of Honor, Encouragement, Service, and Fellowship, the mission of Sigma Pi Sigma takes a longer view.

Founded in 1921, Sigma Pi Sigma is a member honor society of the Association of College Honor Societies. Our society has some 75,000 historical members. Election to Sigma Pi Sigma is a lifetime membership.

The Society of Physics Students (SPS) was formed in 1968 with the union of Sigma Pi Sigma and the AIP Student Sections. Today Sigma Pi Sigma is housed within the SPS.