

APRIL 9, 2008

Special points of interest:

- We will soon conduct an "Experiment of the Month"
- The Society of Physics Students website is up and running. The link is <http://www.spc.edu/SPS>
- Two members will be presenting a poster board at the Penn-State University zone 3 Conference: David Jacome & Samik Adhiraki
- We need to start planning for Physics Day at Six Flags.

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What is IQ?

People are always testing their abilities by taking tests to see what level they stand at compared to others. The best scientists in world study the results of these tests, and try to better there weaknesses by reading more. The most famous form of test is called the Intelligence Test. The intelligence test is used to determine what kind of skills a people has in a given area of study. In this case, it scores the person who takes it on reading, math, memorization, and scientific abilities. For these reasons, people who take it think hard about choosing the correct answer. In other words, a person who rushes to finish sometimes doesn't read a question fully or may not understand the full context. For example, let's say you're a

medical doctor, and people depend on you to save their lives. Your job is to help that people by fixing their disability in the best way possible. So, you can't rush through the operation to finish, because the results will not be as great. Or, let's say that you are a scientist. The world to you is viewed differently compared to normal day people. Your abilities are not the same as others. While some depend on math to make decisions, you look at the environmental factors more closely. So, this shows how important a test could be. Intelligence is very important to learn, and test.

Look at this picture:



Here we a child taking an intelligence test. A child in the second grade successfully completes part of the Wechsler Intelligence Scale for Children, a widely used intelligence test for children. In this part of the test, the child is shown a picture of an abstract design and then asked to reconstruct that design using red and white blocks.

Measuring Intelligence

The first intelligence tests were short-answer exams designed to predict which students might need special attention to succeed in school. Because intelligence tests were used to make important decisions about people's lives, it was almost inevitable that they would

become controversial. Today, intelligence tests are widely used in education, business, government, and the military. However, psychologists continue to debate what the tests actually measure and how test results should be used.



Monthly Experiment in Late April

The point of having an IQ test is to understand our weaknesses, and learn from others how to better them. Doing an experiment is great because we learn how to divide work among our members. Depending on the results of the IQ test, members will know where they stand and what role they should play in this monthly experiment. Getting together, our society can change the way people view the world by doing experiments and learning these important principles. People

who do something, always end up getting something in return. Research is very important, no matter what you do in life. Either physics, math, biology, chemistry, even business. A businessman can't go into the real world not understanding who the competitors are and how the market is changing. A physicist needs research because technology never stay's the same, it's constantly changing. So, we all benefit from during this experiment. In the end, the product we get or the results

obtained will be a group effort. We can always go back, and look at what we all did together. It's an experience that's priceless to us, and to other students it opens the door for them to come to our meetings or witness experimentation for perhaps the first time. Every experiment we do will be taped and put on the website. From this month on, the monthly experiment will be an important part of our society. I hope that everyone enjoys it and we all learn to appreciate physics by doing them.

*"Physics is like Sex,
Sure it might give some
practical results, but that's
not why we do it"*

Dr. Richard Feynman

Sir Francis Galton

Interest in measuring individual differences in mental ability began in the late 19th century. Sir Frances Galton, a British scientist, was among the first to investigate these differences. In his book Hereditary Genius (1869), he compared the accomplishments of people from different generations of prominent English families. No formal measures of intelligence existed at the

time, so Galton evaluated each of his subjects on their fame as judged by encyclopedia entries, honors, awards, and similar indicators. He concluded that eminence of the kind he measured ran in families and so had a hereditary component. Believing that some human abilities derived from hereditary factors, Galton founded the eugenics movement, which sought to im-

prove the human species through selective breeding of gifted individuals.



Prototype Cruise Missile

"Technicians testing a Missile"

At your left, you can see Aerospace technicians performing a vibration test on a prototype cruise missile. New aerospace technologies must undergo a rigorous testing phase before production.

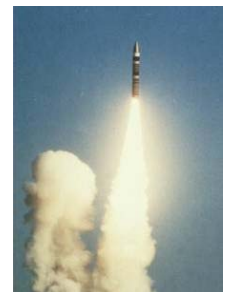
So, what's important about test?

Tests are designed to ensure

that the new systems perform as planned and that they are able to handle a variety of adverse conditions and circumstances.

This allows us to change the way the missile is launched, or to add extra components to make is safer for launching.

Here are the results:



In the end, we have a successful launching

Sigma Pi Sigma

This year, two members will be inducted in Sigma Pi Sigma, which is the honors society of physics. The first student is Antonio Pane. He is in his senior year, and also majoring in Math. A person who is always willing to help people in any way he could. Perhaps, mostly known by his peers to tutor at the Call Center. People really admire his willingness to keep working hard even though at times it's difficult to do many tasks at once. But still, Antonio should be know for his

accomplishments as a member of the society of physics students, and now as a Sigma Pi Sigma member in late April. So, thanks for your willingness to always be there.

Another student is Nischal Neupane. Many don't really know him as well, besides his background from Nepal. He is also majoring in Math. Students like Samik Adhiraki would call him a brother, someone who gives good advice to people. He is a quiet individual who has

few words to say. Over the years, he has become interested in quantum studies, an area called string theory. Even though he's not an active member of SPS, everyone would like to see more of him. But, still we honor him as a member of Sigma Pi Sigma.

Congratulations to both of you!

Documentary Response Questions

Beginning Question:

Was it the right documentary to show, did it inspire any of you to come up with an invention? In no more than a few sentences let me know your ideas after watching the "Google Boys"

1) In your mind, do you think that an invention comes from careful thinking? Like in the documentary, are taking the right steps always important.

2) What do you think about today's meeting, did it surprise any of you? Should we have more documentaries about these guidelines?

RESULTS: (FROM 5 RESPONSE SHEETS)

	Most common reply:	Least common reply:
Beginning Question:	<u>Note:</u> Only one person answered this question, so there is no "Most common reply"	The presentation was nice, but there is a lot of science and math behind Google, too.
Question 1:	Ideas come to you by surprise.	Little people get ideas from others who repeat them many times.
Question 2:	Yes, the documentary was great. (We should have more documentaries so that it could inspire the thinker within us.	You show a video on how an idea was carried out. Ideas do not come from videos.

"To see the world is to love and understand it, and physics helps to keep that strong and alive"

David Jacome



An idea is like a bomb I've learned, it just comes to you when you least expect it. But, a bomb only kills people's ideas & dreams, how could one compare?"

Isaac Newton



April 9, 2008

Please don't be shy, let me know if you have something in mind for the next article. This article is for our society, "Give your opinion, or talk about a current event in physics, the option is open to you.

Check us out at :

HTTP://
WWW.SPC.EDU/SPS



The SPS website is up and running. Any member can visit the site. [The SPS](#) (first page) displays officer's contact information, and a description of our society.

There is one page for the [Meetings, Presenters, & Events](#). Starting next month, members can download the articles, event flyers, or zone 3 conference brochures.

Also, the [Monthly Experiment](#) page, which is currently under-construction. At the end of the month, we will choose from a list of experiments. Then we will conduct it and video-tape it to be displayed here.

Another is the [Sigma Pi Sigma Page](#), members who were previously inducted, and the current inductees.

[Our Mission](#) page, "What are the goals of our society?".

Next month, another page will be created called "[Research & Internship Opportunities](#)". (More information about this in the next article)



Penn-State Zone 3 Conference is 2 days away!!!

This is exciting, the count-day begins. For those who won't be attending, another conference will be shortly coming in the next months ahead.

But, we want all the members to be a part of this experience. So, how do we bring this to you guys.

We will be having a rehearsal meeting on:

Friday, April 11, in pope 2 at 11:00 am.

For those who want to come, you're invited. Two members will be presenting their poster boards and giving a brief talk on the topics chosen. So, each

members will have 15 minutes to talk about their posters, afterwards, the floor will be open for any questions.

Please come and see a preview of the presentation to be done at Penn-state university. Meet some of the members.

(Donuts, bagels, and fruits will be available at entrance. Orange juice and apple juice will also be served.)

I wish all the presenters good luck mostly **Samik Adhiraki**, who will be presenting for the first

time.

Other than that, for those attending, please be on campus at 3:00 pm on Friday, we will be departing at 4:00 pm and will arrive at 9-10ish at Penn-state university.

Those attending are:

Ronald Maldonado

David Jacome

Tony Maldonado

Samik Adhiraki

Have a great trip!!!!



"Here we go, our ideas travel and every new place we visit gives us new goals to set forth, and therefore we get more ideas."

Also, "I see someone in that balloon, do you, me or you, we are the creators of a better tomorrow, and we are the vision makers of the future".

(Let's enjoy this conference guys!)

David Jacome