

WELCOME TO

HONORS
PHYSICAL
SCIENCE

AT SARASOTA HIGH



MR. DOUGLAS GILLILAND

[HTTP://WWW.SHSPHYSICALSCIENCE.COM](http://www.shsphysicalscience.com)

Introductions



Who
Are
You?

The person at the computer and the person sitting next to them make up a computer group. Introduction includes:

- Name
- School you attended last year.
- What do you like to do in your spare time?
- Interesting Family History or pets?
- What's something unique about you?

Person with fewest letters in first name begins.

Each person will have 1 minute each.

Do not start until the timer begins.

What is Honors Physical Science?

A course
designed to teach
the fundamentals
of Chemistry &
Physics.



Scientific Skills Topics:

- Laboratory Safety
- Metric System of Measuring
- Calibration & Reading Instruments
- Scientific Notation
- Significant Figures
- Dimensional Analysis
- Graphing, Interpolating & Extrapolating



Topics covered in Chemistry:

- Classification and Structure of Matter
- Development of Atomic Theory
- Periodic Table and Periodic Law
- Families of Elements
- Ionic & Covalent Bonding
- Chemical Reaction Types
- Solution Chemistry: Acids, Bases & Salts



Topics covered in Physics:

- Gas Laws
- Phases of Matter
- Atomic Theory
- Nuclear Physics
- Kinetic Theory



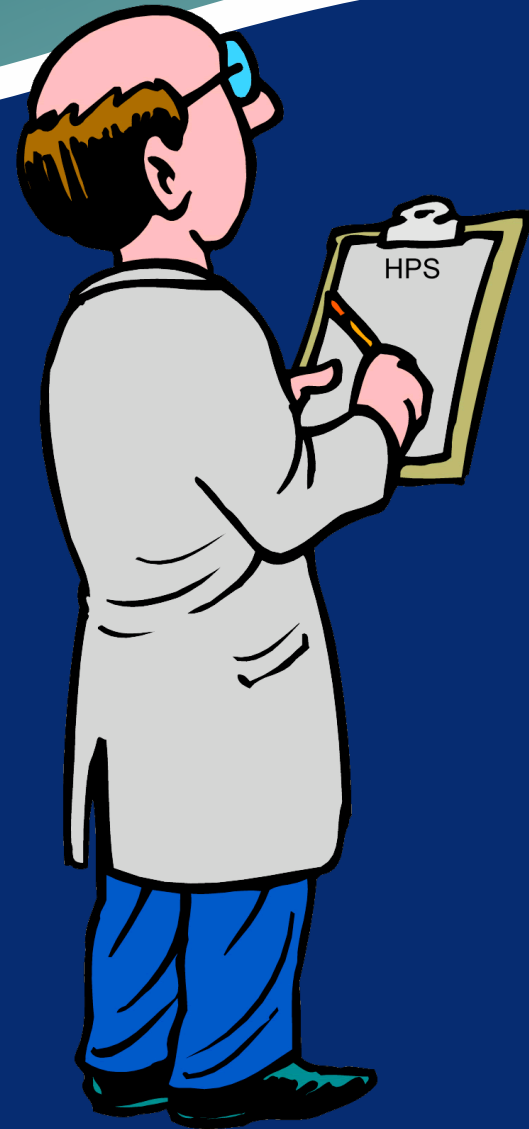
Items Required Daily in Class:

This list is on our home page.

- 3 ring binder, 2 - 3 inch
- Pencil, pen and paper
- Graph paper
- Scientific Calculator (non-graphing)
- Metric Ruler
- Most importantly: YOU!



How will you be graded?



- Exams & Quizzes
- Computer Programs
- Laboratory Experiments
- Homework (Concept Maps, Worksheets...)
- Employability Skills (materials, attendance...)
- Extra Credit Movies, On-Line Quizzes...

How to be Successful:

The only place where success comes before work is in the dictionary. - Unknown

- Have all materials with you every day.
- Come to class every day ready to learn.
- Keep up with the work - don't fall behind.
- Don't be afraid to ask questions.
- Do assignments early. Due date \neq do date.
- Work with your partners - but don't copy off them.
- Come in promptly before/after school to makeup work.



Please follow these rules:

Live so that your friends can defend you but never have to. - Arnold Glasow

- Do not bring drinks or food into the room - including water. Liquids & computers don't mix.
- Come to class on time. Points deducted for being late. Three tardies = detention, four tardies = referral.
- Remain in your assigned seat unless you have permission to get up. Work until the bell rings.
- Raise your hand and be recognized before you talk.
- Treat others with respect. If it isn't yours don't touch it.
- Attend to personal needs before coming to class.

How is the class run?



Computer Assisted Learning



Students work in cooperative groups of two on tutorial programs and group quizzes.

Laboratory Experiments



Students will conduct over 25 laboratory experiments. You will work in a lab group of 3 students. Everyone is required to wear safety apron, glasses and lab shoes.



Student can get Assistance:

Before School:
Every day
7:00 - 7:25 AM

After School:
Times will be
announced



Physical Science Hall Pass

You can leave the room by obtaining a punch on your hall pass. You can use

your hall pass to:


1. Go to your locker.
2. Use the restroom.
3. Turn in a late assignment 24 hours late.

You can use unused punches to drop grades at the end of the quarter. 1 punch = 15 pts.

Hall Pass - Mr. Gilliland
Valid 1-13 thru 5-29, 2009

1 Building 14
2 ROOM 216
3

NAME _____ PER _____



NAME

PER

3

If you lose your hall pass you will not be able to leave the room until the second quarter hall pass is issued.

Assignment Due Dates



All assignments are:
1. Verbally assigned.

2. On this screen when you walk in.

Write down your assignments in your assignment book.

Assignments are collected at the very beginning of the period. You can turn an assignment in up to 24 hours late for 100% credit and one punch on your hall pass.

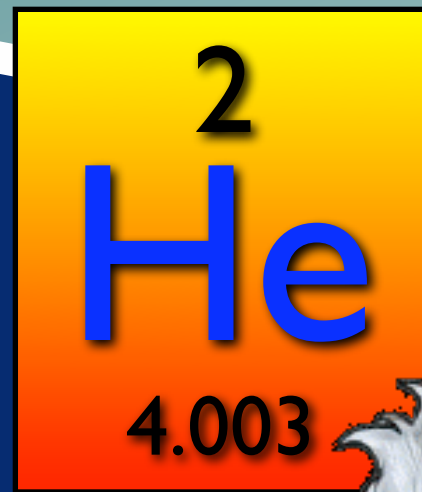
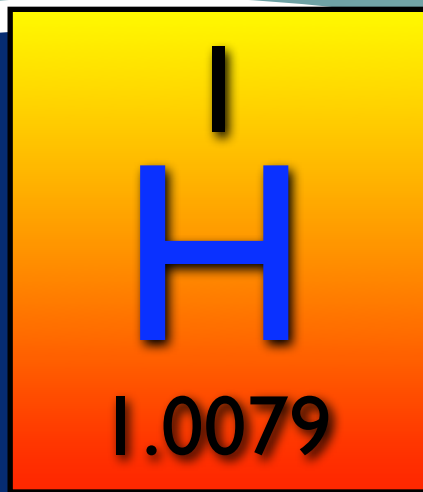
Write down all assignments and due dates in your planner. "I didn't know it was due" is not an acceptable excuse.

Any



Questions?

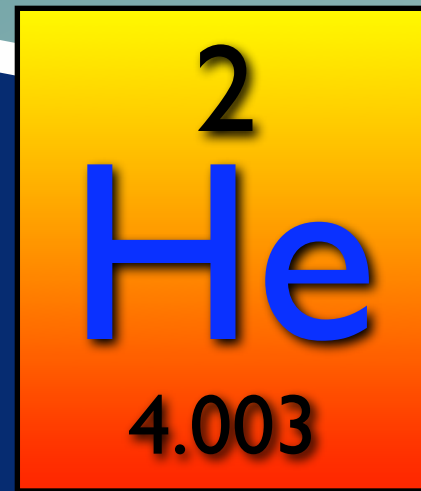
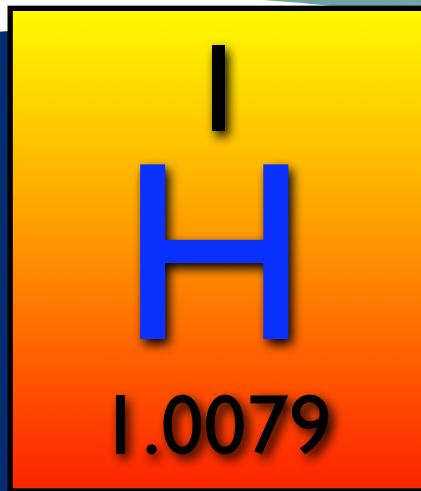
CHEMISTRY DEMO



A Tale
of Two Gases



Physical & Chemical Properties



How are Hydrogen and Helium similar?

How are Hydrogen and Helium different?

Demo Time!

One way hydrogen and helium differ is in the chemical property of *flammability* - the ability to burn.



QUESTION:



What famous disaster was caused by the use of Hydrogen gas?

The Hindenburg Disaster

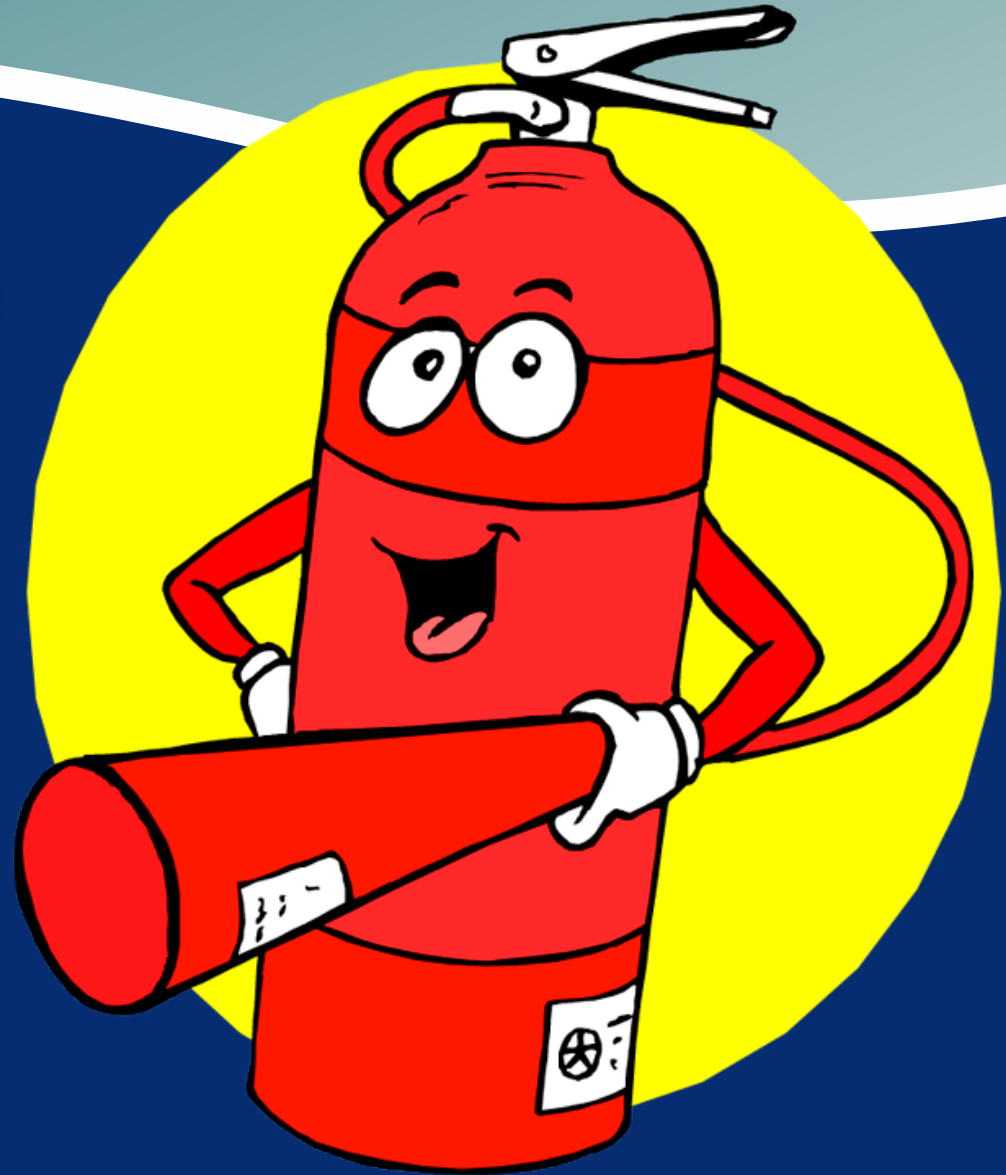


New York / Lakehurst, May 6th 1937, 7 pm: The "Hindenburg" has come all the way from Europe - a luxurious flying hotel, faster than any ship. The pride of the Third Reich prepares to land, and hundreds of onlookers have gathered to watch.

Then, all of a sudden, a burst of flame just forward of the upper fin. In a matter of seconds, the largest airship ever built goes down in a fiery blaze. Thirty-two people lost their lives.

Question:

1. What substance is produced when you burn hydrogen?



Hydrogen is used as Fuel for the Space Shuttle

Solid hydrogen at -259°C (-434°F) is used as fuel in the Shuttle.

Oxygen



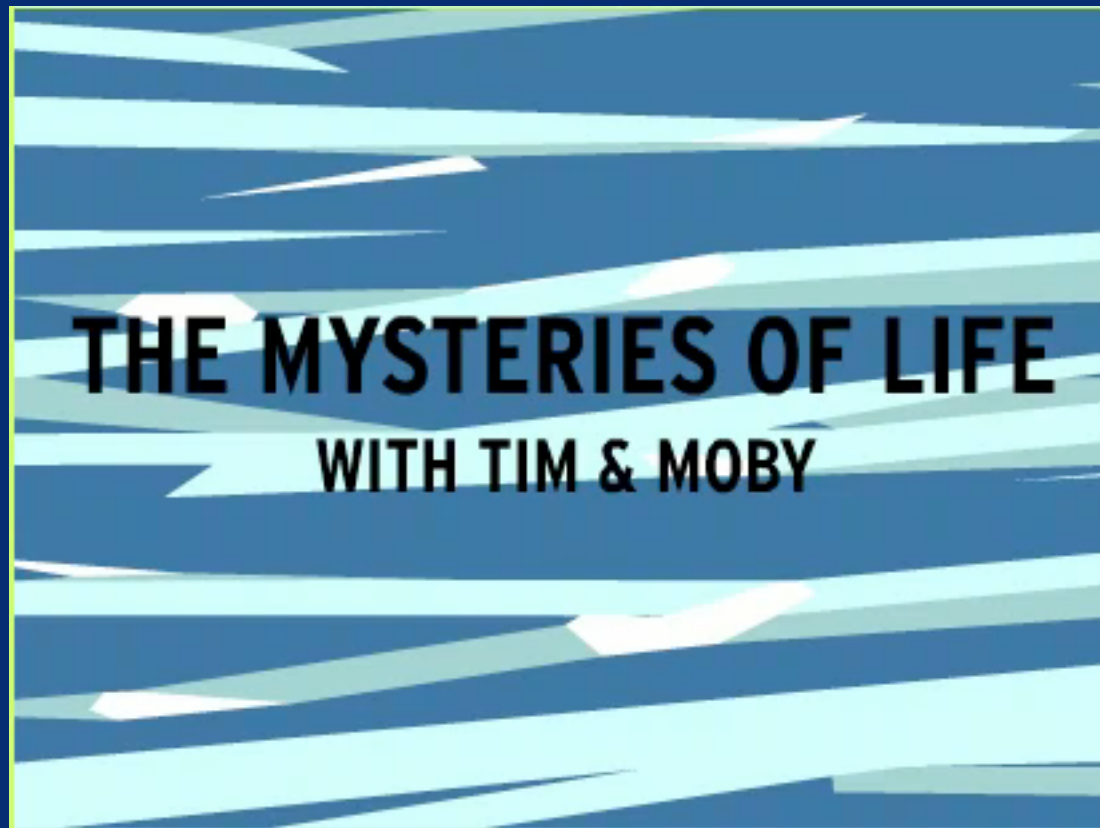
Hydrogen

Every 10 seconds the Shuttle burns enough liquid hydrogen to fill a swimming pool.

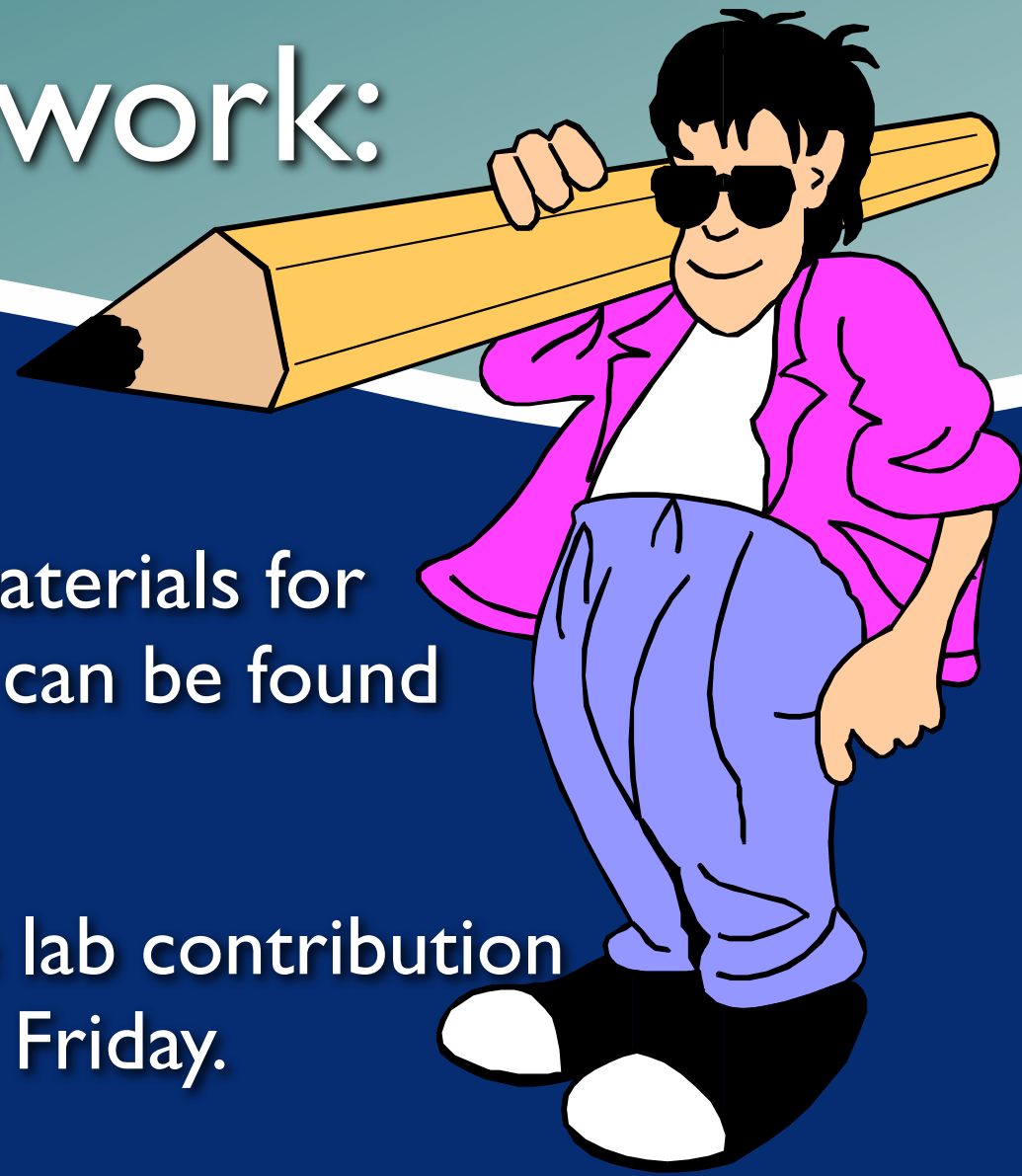


Hydrogen + Oxygen yields Water

Water: King of Compounds



Tonight's homework:



- Work on getting your materials for this class. A list of items can be found on our home page.
- Show your parent(s) the lab contribution form. Due no latter than Friday.
- Complete the Student Information page including a short autobiography on the back.

Honors Physical Science Web Page

For Info on this class please visit
our web site at:

<http://www.honorsphysicalscience.com>

- Calendar
- Grades
- Message Board
- NetTutor
- Online Quizzes
- Syllabus

HOME CALENDAR MESSAGE BOARD GRADES KEYNOTES NETTUTOR EXTRA CREDIT QUIZZES PRINTSHOP BLOG INFO

Welcome to Honors Physical Science

Mr. Gilliland's Honors Physical Science Class @ Sarasota High School, Sarasota FL



The man of science does not discover in order to know; he wants to know in order to discover.

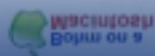
SARASOTA HIGH SCHOOL

271079
Visitors since August 19, 1999.



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Any



Questions?

It's Time to Play

Webpage Scavenger Hunt!



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Dalton	Mendeleev	Thomson	Moseley	Rutherford	Curie	Bohr	Becquerel	Einstein

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