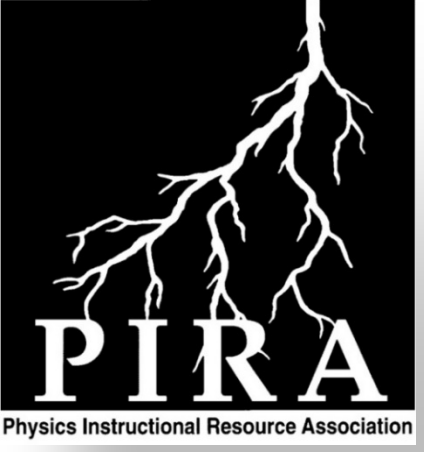

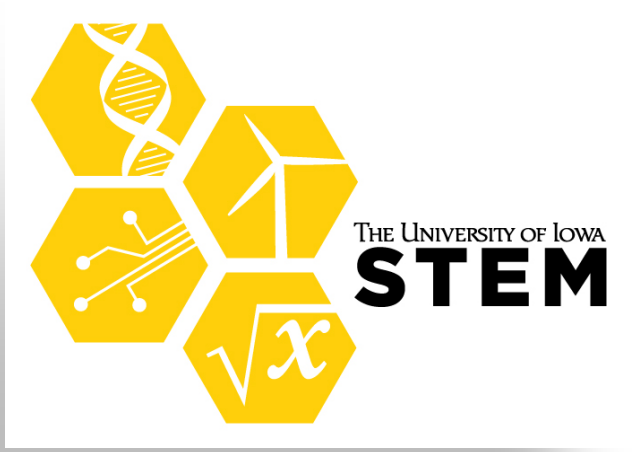

Considerations for a Successful and Long Running Outreach Program

Dale Stille
University of Iowa

PIRA
Physics Instructional Resource Association

The University of Iowa STEM

Hawk-Eyes on Science

50 plus years – morphed in 2004

Hawkeyes in Space

2nd program – morphed in 2010

U of Iowa started a STEM office in 2014

Volunteer Effort

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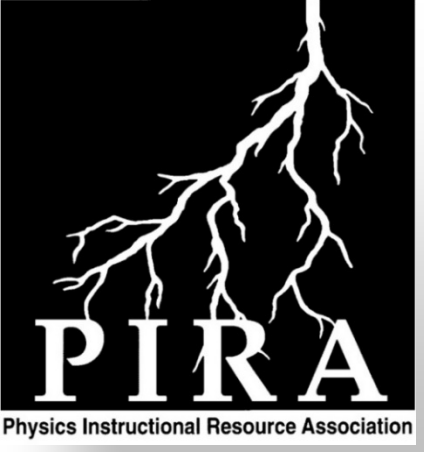
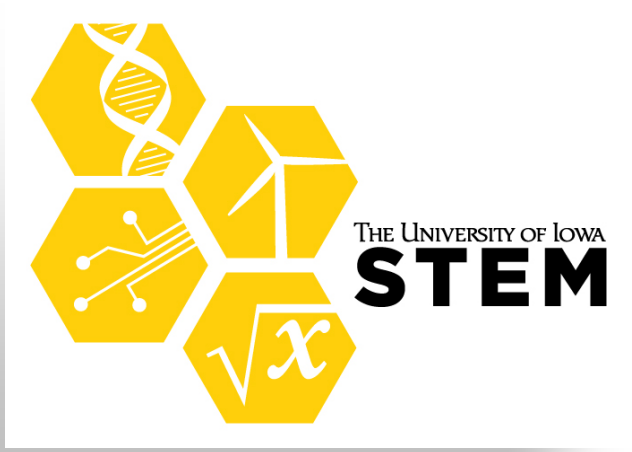
Best Advice

Start Small – Grow Large in Sustainable Steps =

Solve One Problem at a Time

(for your situation!!)



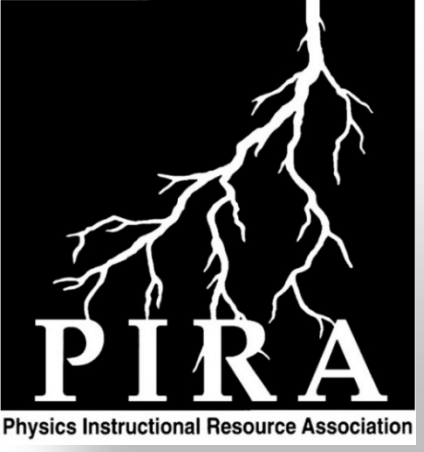


1. Infrastructure

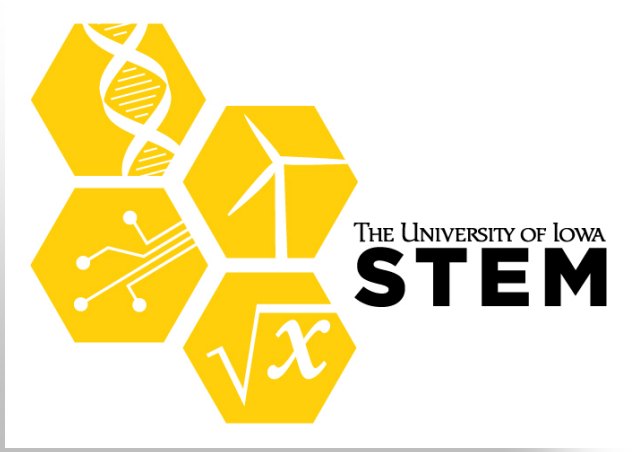
2. Money and Support

3. Themes, Modules, and Demonstrations

4. Give Away Items



Infrastructure



Survivability of Your Outreach Materials and maybe your program

= Protective Boxes, Transport Devices, Carrying Containers

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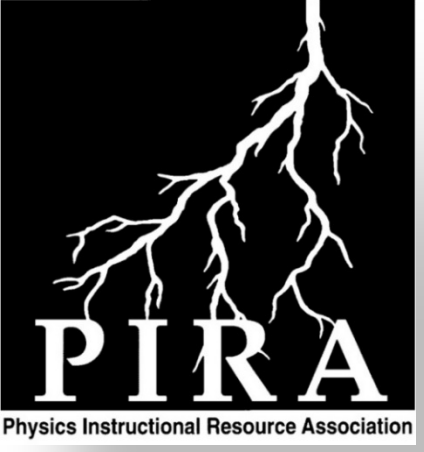

Support

Personnel = volunteers or paid efforts

More difficult that you would think!

Administrative = booking, websites, etc.

Centralize and coordinate your effort.

What kind of tracking?

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Money

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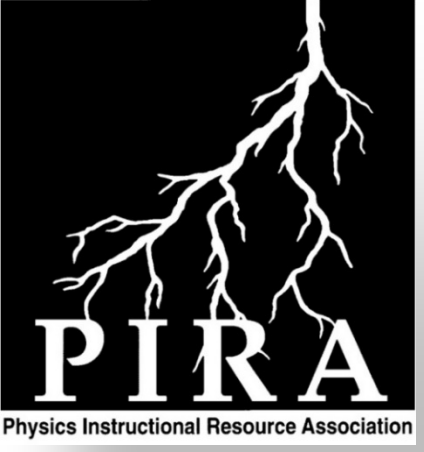
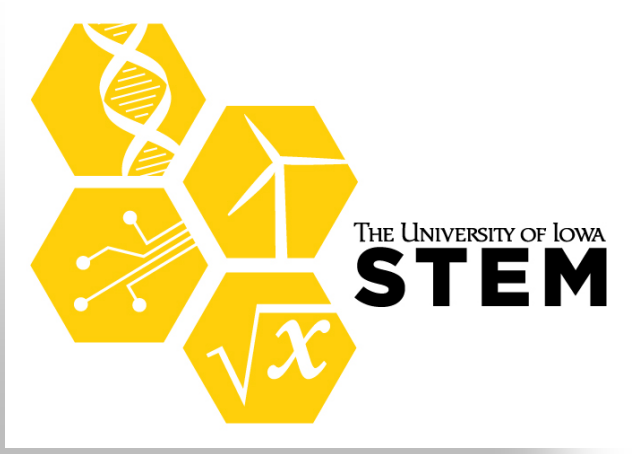
Miscellaneous = banners, cards or brochures, transportation, repairs, insurance, new equipment.

Who will be your initial contact personnel?

Do you have any regulations or recommendations to observe?

What kind of hand out or advertising materials?





Infrastructure, Support, and Money are Extremely Important!!

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Themes

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Indoor or Outdoor venue

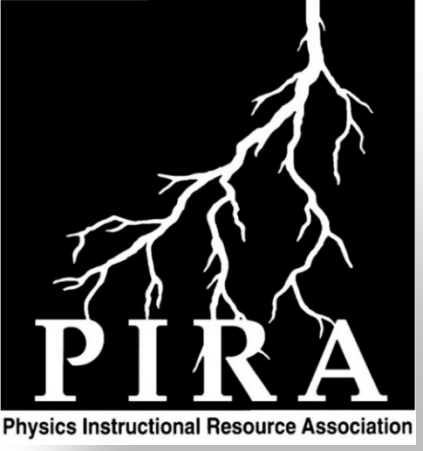
Booth or Walk By Exhibit

Halloween

Physics

Astronomy

Chemistry and Liq. N2



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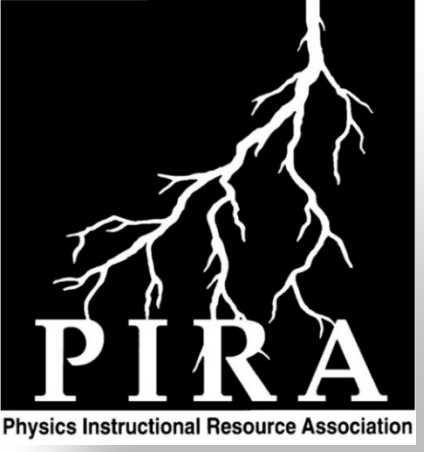
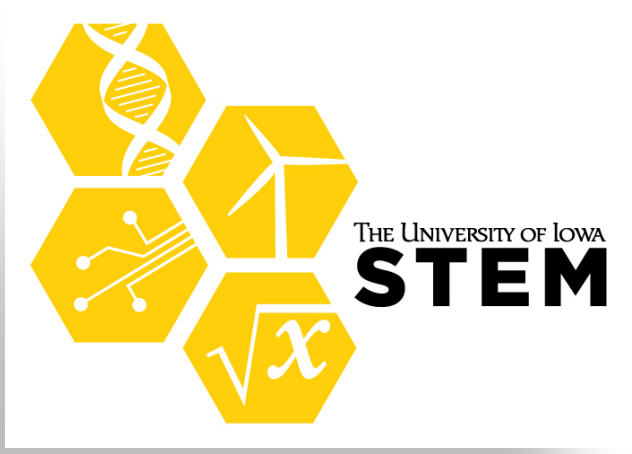
Modules and Demonstrations

Electricity & Magnetism

Generation of Electricity, Communication, Fiber Optics, Lasers and Applications, Information Storage, Holograms, Fingerprinting, The Universe.





AAPT Outreach Guide

(a work in progress)

http://faraday.physics.uiowa.edu/hes/AAPTOutreachGuide.docx

or

http://faraday.physics.uiowa.edu/hes/AAPTOutreachGuide.pdf

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HANDS-ON DEMO VERSATILITY

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1. Electromagnet
2. Circuits
3. Radiating Tower / Transmitter

   Leads into Communication Devices and Electromagnetic Spectrum Discussions
4. Induction - Transformers
5. Linear Motor / Solenoids
6. Rail Gun

   Leads into Astronomy

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History = AC version of an Elihu Thomson Coil

Concept = Lenz's Law
Phase Shifting

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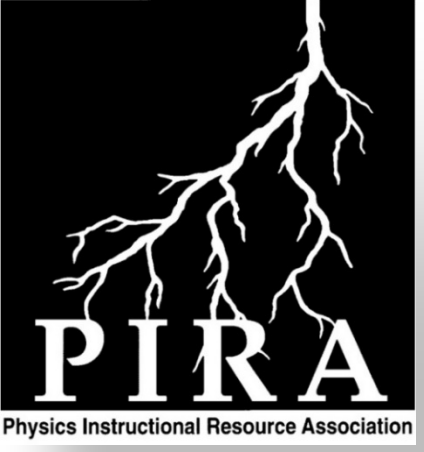
Give Away Items

- Spectrum Glasses
- Light Sticks
- Tippy Tops
- Celts
- Super Balls
- Helicopters or Gliders
- Bug Eye Lenses
- Hopper Poppers
- Other Oriental Trading Items



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Bring Them to You

Admissions

Partner with schools or colleges in your area.

School Fund Raisers

WISE

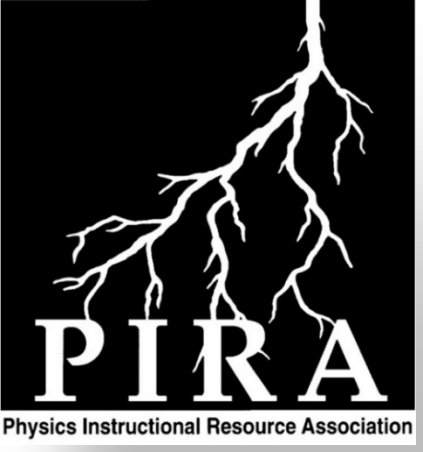
Center for Diversity and Enrichment

Cub Scouts, Boy, Scouts, Girl Scouts

4-H

After School Stem Programs

City Recreation Summer Camps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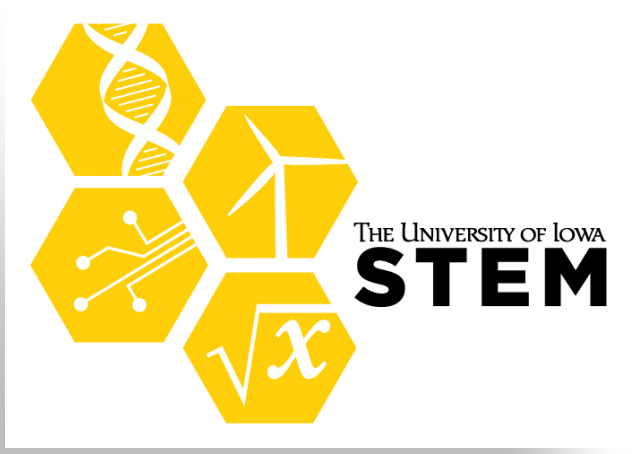
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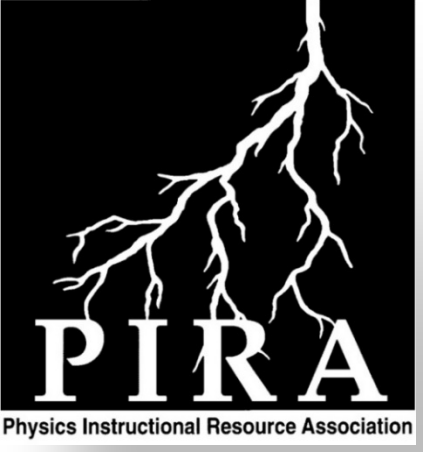
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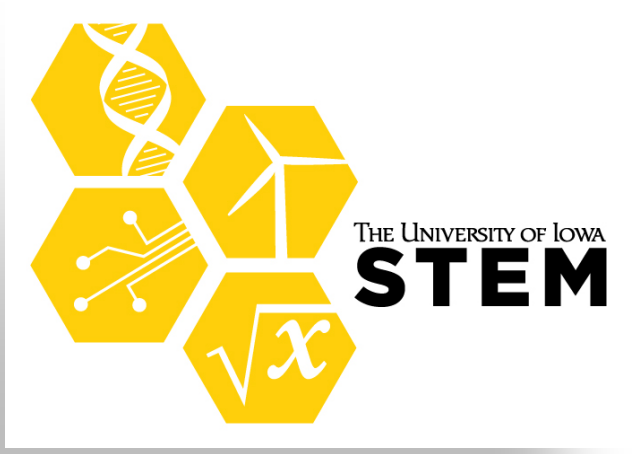
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