

# Boil, Boil, Toil and Trouble – Connecting with the Community through Microgravity Boiling Experiments

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## Get Away Special Team Info

- ▶ Undergraduate microgravity research team
  - Focus on research projects and outreach activities
- ▶ Approx. 12 members
- ▶ Multi-disciplinary group



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## Lessons Learned

- ▶ Get input from teachers for improvement on classroom visits
- ▶ Participate in a variety of activities
- ▶ Collaborate with other departments and established programs
- ▶ Keep it simple
- ▶ Working closely with public relationships puts you in a position to connect with more people
- ▶ Show, don't tell (use projects)
- ▶ Use any venue to help the community understand

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## Classroom Visits



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# Classroom Visits

- ▶ Have a plan
- ▶ Teacher survey after visit
- ▶ Work with educators to develop lesson plans
- ▶ Have students come up and be a part of the lesson
  - Solar system example

**Lesson Plan – Earth Systems**

Unit Theme: Solar System	Subject Area: Science
Lesson Title: Size and Forces of the Solar System	Number of Learners: Entire class
Grade Level: 9th	Time Needed: 50-45 minutes

**Curriculum**  
 Standard 1: Students will understand the scientific evidence that supports theories that explain how the universe and solar system developed.  
 Objective 2: Relate the structure and composition of the solar system to the processes that exist in the universe.  
 f. Relate the structure of the solar system to the forces acting upon it.

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**Please rate the overall quality of the presentation. \***

1 2 3 4 5

low      high

**Please rate the level of student interaction. \***

1 2 3 4 5

low      high

**Was the information taught at a level the students could understand? \***

Yes  
 No  
 Sort of

**Was the subject matter relevant to the students' current studies? \***

Yes  
 No  
 Sort of

**Did the presentation get students more excited about science? \***

1 2 3 4 5

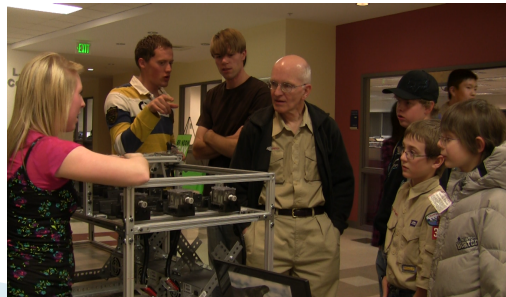
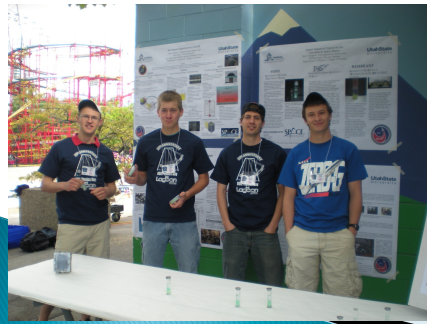
No      Yes

**How many students did we visit?**

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# Variety of Activities



## Variety of Activities



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## Collaborate, Collaborate, Collaborate

- ▶ No need to re-invent the wheel
- ▶ There are a lot of other groups also doing outreach
  - Contact and collaborate with them
  - Pool resources
  - Advertise for each other's events
- ▶ Helps to expand your variety of activities



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## Keeping It Simple

- ▶ Use language appropriate for the audience
- ▶ Bring hands on demonstrations
- ▶ Remember what kept your interest at that age
- ▶ Don't bring a big group to present at small activities
- ▶ Bring a big group for large activities



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## Public Relations

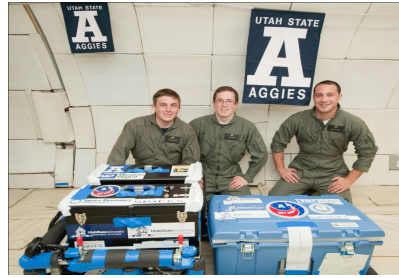
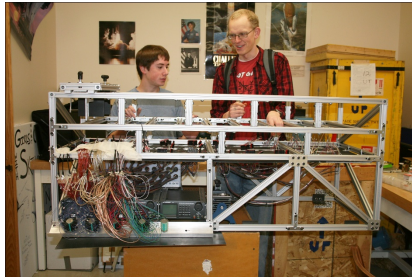
- ▶ Get in contact with your department or college's PR person
  - They can connect you to local services
  - They can describe your events better than you can
- ▶ Possible PR outlets
  - Newspapers
  - TV
  - University magazines
  - Public radio



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## Using Projects to Connect



- Have a project and hardware you can use to show students what STEM (Science, Technology, Engineering, and Mathematics) is about

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## Using Projects to Connect

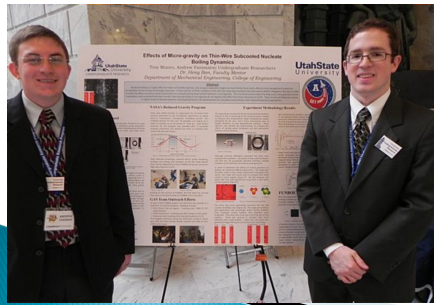


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# Outreaching to the Community

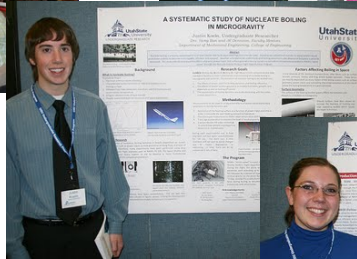
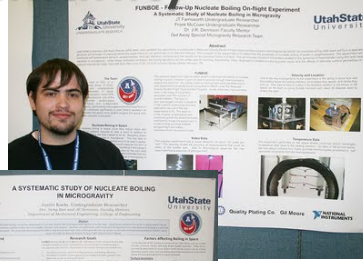
- ▶ Use any resource and avenue available
- ▶ Be aware of activities you can help with
- ▶ Let sponsors know what you're doing



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# Outreaching to the Academic Community



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## Statistics

Total number of community members interacted with	3,500
Number of classrooms visited	54
Number of students personally visited	1,550
Public relations stories (newspaper articles, TV spots, etc)	18
Academic presentations	9 (for 2010–2011 academic year)
Partnerships	Society of Women Engineers, AIAA, Society of Hispanic Professional Engineers, Engineering Council, Science Council, Society of Physics Students, MESA, USU's College of Education and Human Services , Clark Planetarium, USU/INL Physics Day at Lagoon

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## Where We Are Going Next

- ▶ Expand collaborative efforts
- ▶ Improve classroom visits
  - Provide materials to teachers
- ▶ Get high school students involved in our next project

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## Questions?



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