Let The Force Be With You! Assembly Program
Monday-Friday, April 12-16, 2010

The Western U.P. Center for Science, Mathematics and Environmental Education will coordinate assembly requests for *The Force* ---for April 12-16, 2010. If your school would like to request an assembly program, please **FAX the attached registration form to Joan Chadde at 906-487-1620 by January 29, 2010.** Scheduling is on a first-come basis.

**Description:** The Physics Force duo of former physics teachers, Hank Ryan and Jack Netland, go above and beyond (literally) to educate, demonstrate, and entertain K-12 students with their blend of slapstick comedy and entertaining physics. The visual excitement of a Physics Force Show brings wonder and scientific enthusiasm to thousands of K-12 students each year. This program comes to the U.P> from the School of Physics & Astronomy at the University of Minnesota. **For more information:** [http://www.physics.umn.edu/outreach/pforce/](http://www.physics.umn.edu/outreach/pforce/) and see other side.

**GROUP SIZE:** Up to 250 students in grades 4-12 at one time.

**PROGRAM LENGTH:** 55 minutes. Allow 15 minutes between assemblies. Program length can be adjusted upon request. Available for EVENING events, so the whole family can share the fun!

**SET-UP/TEAR DOWN TIME:** 1.5 hours before and after the assembly program.

**COST:** $500 for the first assembly; 2\(^{nd}\) assembly: $300\(^*\); 3\(^{rd}\) assembly: $250\(^*\)

\(^*\)for additional assemblies in same location.

**For More Information, Contact:**
Joan Chadde, Assembly Coordinator
Western Upper Peninsula Center for Science, Mathematics and Environmental Education
Email: jchadde@mtu.edu  Tel: 906-487-3341  Fax: 906-487-1620

**REGISTRATION FORM** (Deadline: Friday, Jan. 29, 2010)

School: _______________________________  Contact person: _______________________________

Phone: ___________________  Fax: ___________________  Email: _______________________________

List all possible dates that work for your school:
___Monday, April 12  ___Tuesday, April 13  ___Wednesday, April 14  ___Thursday, April 15  ___Friday, April 16

Total Number of Assembly Programs requested: 1  2  3  TOTAL AMOUNT DUE: _______

Assembly Location: _______________________________

List all possible times for the Assembly Program:

Date:__________  Start/End Times _______ - _______  Grades Attending: _______  Total Attending: _______

Date:__________  Start/End Times _______ - _______  Grades Attending: _______  Total Attending: _______

Date:__________  Start/End Times _______ - _______  Grades Attending: _______  Total Attending: _______

Time your school begins: ______________  Time your school dismisses: ______________

**EMAIL or FAX your registration form** to Joan Chadde at:

Email: jchadde@mtu.edu  FAX: 906-487-1620  Tel: 906-487-3341
The Physics Force

Master demonstrators and humorists Jack Netland and Hank Ryan delight old and young alike with a truly wonderful science experience. In conjunction with the staff at University of Minnesota this team, with an eye on primary and secondary school curricula, has developed a physics demonstration program for all ages. Jack and Hank are gifted teachers who interact with the audience and present physics as understandable, not magic.

Hank Ryan

For many years they have presented to standing room only audiences in Minnesota. They have appeared at the national convention of the American Association of Physics Teachers, on Newton's Apple and for two years at Disney World's Epcot Center. Hank traveled twice to Europe and appeared on German television as guests of the "Knoff Hoff" show and they perform annually at the Minnesota State Fair.

Trademarks of their program is "bigger is better and humor is educational". Why implode a pop can when a 55-gallon drum is available? Or hurl a ping-pong ball when you can shoot it over 600 miles/hr out of a cannon that uses only atmospheric air pressure. This program is a delight for parents, grandparents and children of all ages. Teachers of every grade level along with their students will be fascinated even if they know little about physics.

Jack and Hank are award-winning teachers as individuals. Both were physics teachers who inspired large enrollments in physics by making the subject exciting and relevant. Hank Ryan (along with fellow teacher Jon Barber) specialized in creating unique cooperative learning packages. The second edition of their book, Practicums for Physics Teachers, was published in 2008. Jack Netland was a frequent guest on the television program Newton's Apple, a recipient of the Minnesota Excellence in Education Award and a past president of the Minnesota Science Teachers Association.

If this show comes to your school or community, be there!

Jack Netland