

Department of Physics K-12 Outreach Programs
August 1, 2007-December 31, 2007

Physics 290M, Service Learning Outreach, meets weekly to discuss aspects associated with service learning (e.g., what students learned from their experience). Physics currently has two service learning classes: QuarkNet (particle physics) and Cosmology (curriculum development). Physics 290S, Outreach Assistance, allows these students opportunity to assist outreach coordinators with school visits (e.g., Focus on Science) or with community events.

Date(s)	Event/Location	Pre-Service Teachers Participating	University Students Participating
8/28/2007-12/15/2007	Physics 290M: Service Learning Outreach	3	6
8/28/2007-12/15/2007	Physics 290S: Outreach Assistance	1	3
TOTAL	2	4	9

Consultations with Individual Faculty/K-12 Teachers

Throughout the semester, I have consulted with individual faculty members from Purdue or K12 teachers to develop units of instruction.

Date(s)	Event/Location	University Faculty	K12 Teachers	Activities Developed
8/1/2007-12/15/07	Physics 290M Service Learning Preparation	2	1	2
8/20/2007	Tindley School, Indianapolis		1	0
8/24/2007	Tindley School, Indianapolis		1	0
10/15/2007	Suncrest Elementary, Frankfort		3	0
11/6/2007	Rochester Schools		6	0
TOTAL	5	2	12	2

College of Science Community Events showcase the excitement of science and mathematics. These events are a great opportunity for students of all ages to learn about science, mathematics, technology, and more in a full day of hands-on activities.

Date(s)	Event/Location	Community Reached	University Students Participating	University Staff Participating
8/15/2007	Indiana State Fair	500	6	4
10/27/2007	Homecoming	500	4	3
TOTAL	2	1000	10	7

PEARLS, Physics Educational Activities, Resources, and Learning Strategies provides activities that get K-12 students excited about physical science and experiences for teachers and parents related to the importance of science, engineering, and technology. The following events were part of PEARLS:

Physics on the Road visits consist of large convocation-style demonstration shows and/or small group hands-on experiences with concepts in physics for the entire school, including students, teachers, and volunteer parents. In the table D represents demo shows and H represents small group hands-on.

Date(s)	Event/ Location	Schools Visited	K-12 Stud Reach	K-12 Teach Reach	Com Reach	K-12 Stud Part	K-12 Teach Part	Univ Stud Part	Com Part
9/11/2007	D/H: Harney Elementary Lebanon	1	250	0	0	0	15	1	0
9/14/2007	D: Frankfort Middle School Frankfort, IN	1	200		0	0	0	0	0
9/27/2007	D: GT Resource Network, Grand Rapids	2	450	30	120	12	0	0	0
10/18/2007	D: Lincoln MS Cambridge City, IN	1	300	10	4	6	0	0	0
11/1/2007	D: SE Indiana Christian Home Educators Lawrenceberg	1	110	20	100	6	0	0	0
11/17/2007	D/H: Physics Open House Purdue Univ		100	5	100	0	0	8	0
11/30/2007	D/H: Fillmore Elementary Fillmore, IN	1	250	20	0	0	0	0	35
TOTALS	7	7	1660	85	324	24	15	9	35

Classroom Visits: These individual classroom visits were developed to take an interactive lesson related to a single concept (e.g., density) to smaller groups. Each classroom visit has been matched to the Indiana Science Standards. Students are then invited to write to share what they have learned. The “best” are chosen to be featured on the Young Scientist website in Physics. A lesson plan is left for the teacher, so he/she may extend the visit and/or complete the activities independently in the future.

Date(s)	Event/ Location	Schools Visited	Classrooms Visited	K-12 Students Participating	K-12 Teachers Participating	Activities Developed
9/9/07	Cryogenic Temperature Westlane MS, Indy	1	5	125	1	0
9/10/07	Cryogenic Temperature	1	5	125	1	0

	Westlane MS, Indy					
9/13/07	Cryogenic Temperature Westlane MS, Indy	1	5	125	1	0
9/14/07	Cryogenic Temperature Westlane MS, Indy	1	5	125	1	0
10/12/2007	Vernier Temperature Probes Eleanor Skillen School #34 Indianapolis	1	4	100	4	0
10/25/2007	Cryogenic Temperature Tecumseh MS, Lafayette	1	4	100	4	0
11/9/2007	Structure and Forces Eleanor Skillen School #34 Indianapolis	1	4	100		1
11/20/2007	Cryogenic Temperature Oak Hill Jr High Converse, IN	1	5	125	1	0
11/28/2007	Cryogenic Temperature St. Thomas Indianapolis	1	4	30	1	0
12/14/2007	Density Eleanor Skillen School #34 Indianapolis	1	4	100	4	1
TOTAL		10	42	1055	14	2

Equipment Loan: Physics has begun a small scale equipment loan whereby Vernier electronic probes, laptops, the cosmic ray detector, and other equipment from the university are loaned to the school. The equipment is delivered by a student enrolled in Physics 290M or 290S, along with a lesson/lab/presentation accompanying it.

Date(s)	Event/ Location	Schools Visited	Classrooms Visited	K-12 Students Participating	K-12 Teachers Participating	University Students Participating
10/1/2007- 10/5/2007	Vernier Labs	1	1	9	1	3

	1 st Assembly Lafayette					
10/8/2007- 10/12/2007	Vernier Labs Jeff HS Lafayette	1	1	15	1	0
10/29/2007- 11/2/2007	Vernier Labs 1 st Assembly Lafayette	1	1	9	1	2
12/10- 12/14/2007	Vernier Labs 1 st Assembly Lafayette	1	1	9	1	2
TOTAL	4	4	4	142	4	7

Professional Involvement: As president of INAAAPT and section representative for the national AAPT, I am involved with professional organizations, sometimes giving presentations/workshops.

Date(s)	Event/Location	University Faculty Participating	K12 Teachers Participating
8/1/2007-8/3/2007	Presented in day-long Physics on the Road Workshop AAPT National Meeting Greensboro, NC	10	10
12/1/2007	INAAAPT Purdue University	8	1
TOTAL	2	18	11