

Activity Title: "How Things Work"

http://www.csuci.edu/ira/index.htm

# Application Instructionally Related Activities Funds Request 2008-2009 Academic Year DEADLINE: Fall and Academic Year 3/14/08 Spring 10/15/08

Applications must first be sent to the appropriate program chair. Chairs will the recommend and route them to the Dean's Office for review and authorization. The Dean's Office will then forward them to the IRA Committee for consideration.

**Please Note that for Fall Requests the						
□ Event □ IT Requirements □ International Travel □ Space/OPC Requirements □ Risk Mo	rield Trip Participant data collection for public dissemination, i.e. interviews/surveys that result is a journal/poster session/newsletter anagement Consultation Late Submission (Passed Deadlines)					
Previously Funded:   YES x NO	'es, Request #					
Does your proposal require IRB (Institut	ional Review Board) approval: ¬Yes ¬No					
Assessment submitted for previously Fu	unded Activity: aYES a NO					
Academic Program or Center Name and Budget Code: Physics						
Date of Submission: 3/14/08						
Amount Requested: \$500 (Should match item 2. E. on page 4)						
Estimated Number of Students Particip	pating: 48					

### **Conditions and Considerations**

**Equipment Purchase**-If requesting large equipment, Project Sponsor must show proof of correspondence with OPC Administration. In addition, all other purchases must follow Procurement Guidelines

**Events**-Attach copy of Events and Facilities Use Request Form (Public Folders-Events & Facilities folder) Consider time frame for set-up and take down.

Participant Data Collection for Public Dissemination-If Project Sponsor proposes to conduct research with human participants then it may be subject to IRB (Institutional Review Board for the Protection of Human Subjects) review. It is the Project Sponsor's responsibility to inquire with the IRB <u>prior</u> to IRA application submission to determine if the project is exempt from IRB review so that funding is not delayed. Please indicate on the cover page if your project is exempt from IRB review.

**Field Trip**-If approved, Identified Risks of Participation and Release Agreement must be submitted for each student to the Program Office (Public Folders-HR Forms).

IT Requirements-Requires proof of correspondence and approval from IT Administration

**International Travel**-Requires International Travel application be submitted to Center for International Affairs.

**Risk Management Consultation**-Requires proof of correspondence with Risk Management.

**Space/OPC Requirements, Infrastructure/Remodel**-Requires proof of correspondence with OPC Administration .

**Late Submission (Deadlines: Fall 3/14, Spring 10/15)**-Requires explanation for emergency funding.

**Fiscal Management:** Project Sponsor's program will be responsible for all costs incurred over and above what is funded through the IRA award and will be responsible for seeing that any revenue that is intended to offset the amount of the IRA award is transferred accordinaly.

### Requirements and Signatures

Please provide the following in your application:

1. **Brief Activity Description.** Describe the activity and its relationship to the educational objectives of the students' program or major.

How Things Work is a course that introduces students to the concepts behind everyday objects and experiences. They see what makes things tick. The course concentrates on ideas, not math, and on familiar scenarios, not abstract constructs. The goal is to excite students' interests in science as they discover that physics is both understandable and fun. Students learn the underlying principles that make our fantastic world work, and they make connections that will carry them beyond knowns to unknowns. Because demonstrations involve everyday materials and objects, students will be able to take ideas home to play on the kitchen counters or family room floors..

To enhance the course, we have the students visit an amusement park and examine the physics of the rides and arcade games. The parks demonstrate many fundamental physics concepts, including conservation of energy, momentum, and angular momentum, torque, force, power, linear motion, circular motion, gravity, and magnetism. Students write a 5-page report on their visit and submit it for a course grade. The park visit is a highlight for many students and they see that physics can really be fun.

This is not a field trip. The choice of an amusement park is up to the students and they may go any time prior to the report due date. We offer, however, a great deal on group-discount tickets at Magic Mountain's Physics Day for those who want to go. The tickets were only \$22.50, which is much less than the normal daily ticket prices of \$59.99. Because IRA funds were not available when I planned the course, I found a private donor who paid \$10 per ticket for students who wanted to attend Physics Day. Having the students pay part of the cost improves commitment and assures attendance. Next year I would like IRA to pay half the ticket cost.

2. **Relation to IRA to Course Offerings.** All IRAs must be integrally related to the formal instructional offerings of the University and must be associated with scheduled credit courses. Please list all classes that relate to the program proposed.

This proposal supports the existing PHYS 103 course, which is a 3 unit course taught each semester. The activity directly contributes to the stated student learning outcomes. The visit is part of the course plan and the report is a graded activity. The course has a maximum enrollment of 24 students. (Enrollment is limited by the number of computers in our physics classroom; we make extensive use of computers in instruction.)

3. Activity Assessment. Describe the assessment process and measures that the program will use to determine if it has attained its educational goals. Please note a report will be due at the end of the semester.

After visiting the amusement park, the students will write a paper for course credit and answer a brief questionnaire about the visit. The reports will be evaluated to determine the extent of understanding students showed for the physics demonstrated at the park. Student interest in this activity will also be assessed. The information will be collected into a report at the end of each semester.

4. **Activity Budget.** Please enclose a complete detailed budget of the entire Activity **bold** specific items of requested IRA funding. (Page 4)

With a 24-student course enrollment, I expect a maximum of 20 students to participate in the group activity per semester. The anticipated cost per ticket will be \$25, half of which will be paid by the students. IRA would pay \$12.50 per student for a total of \$250 per semester — or \$500 per year.

5. **Sources of Activity Support.** Please list the other sources of funding, and additional support for the activity.

The students will pay half the cost of a ticket if they join the group at Magic Mountain's Physics Day. They will pay a total of \$500 for the activity. Students who choose to go to other amusement parks will pay their own way, which may be \$200. The students will be encouraged to car pool because they also will pay parking, which is \$15.

This year a private donor paid \$80 for student tickets. He attended the event and received a complementary pass – but paid parking.

7. **Acknowledgment.** Project Sponsor and Program Chair acknowledge that they have reviewed and accepted the Conditions and Considerations detailed on page 2.

Signatures and Dates

KnomelCallad	03/14/08
Project Sponsor	Date
Cyrittian . Wycl	3/14/08
Program Chair/Director	Date
A-Fraida	314/18
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### ACTIVITY BUDGET FOR 2008-2009

1. Operating Expense Budget	
A. Supplies	none
B. Vendor Printing	none
C. In-State Travel	included
D. Out-of-State Travel	none
E. Equipment Rental	none
F. Equipment Purchase	none
G. Contracts/Independent Contracto	rs none
H. Honorarium	none
I. OPC Chargeback	none
J. Copier Chargeback	none
K. Other (Please Specify)	\$500
TOTAL Expenses	\$500
2. Revenue  A. Course Fees B. Ticket Sales C. Out of Pocket Student Fees (exclusive of course fees) D. Additional Sources of funding (Please specify And indicate source) E. Requested Allocation from IRA	

none

Total Revenue

### ACTIVITY BUDGET FOR 2008-2009

1. Operating Expense Budget	
A. Supplies	none
B. Vendor Printing	none
C. In-State Travel	included
D. Out-of-State Travel	none
E. Equipment Rental	none
F. Equipment Purchase	none
G. Contracts/Independent Contractors	none
H. Honorarium	none
I. OPC Chargeback	none
J. Copier Chargeback	none
K. Other (Please Specify)	\$1340
The anticipated cost per ticket will be \$25	, half of which will be paid by the students.
IRA would pay \$12.50 per student for an e	estimated 20 students in a class for a total of
	s approximately \$7.50 per student for parking
and \$25 for my admission and \$15 for par	·
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TOTAL Expenses	\$1340
2. Revenue	
A. Course Fees B. Ticket Sales	
C. Out of Pocket Student Fees	
(exclusive of course fees)	\$800
Each student will pay \$12.50, or half the parking fee per car. I assume some contract the total would be \$20 per student for semesters = \$800.  D. Additional Sources of	ne ticket fee. Also students will pay \$15 arpooling, so each student pays \$7.50. 20 students each semester times two

funding	
(Please specify	
And indicate source)	\$40
The instructor will pay \$25 for a ticket and \$15 for parking to jo	in the students for
the day. This does not include the purchase of ice cream, wh	ich is optional.

## E. Requested Allocation from IRA

\$500

Total Revenue

\$1340

# TRAVEL EXPENSE CLAIM (TEC) Must be submitted within 30 days of the end of travel

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### Accounting for IRA Funds

"How Things Work" class went to Magic Mountain

### Fall 2008

Number of students who went	Number of friends	Students with season pass	\$12.50)	Amount of money collected for friends (6 @ \$26)	tickets at group discount (15 @ \$26)	Money requested from IRA (9 @ \$13.50)
10	6	1	\$ 112.50	\$ 156.00	\$ 390.00	\$ 121.50

10/2/08



# Cash Group Shipment Voucher

Order No: 000000136728 Order Date: 09/24/2008

Visit Date: 09/28/2008 Sold Rachael

000000088516	
Customer No:	

CSU CHANNEL ISLANDS PHYSICS JEROME R. CLIFFORD\* 2215 STACY LANE Attn Sold to: Address:

CAMARILLO, CA 93012

Shipping Address:	

Ship to: CSU CHANNEL ISLANDS PHYSICS Address: 2215 STACY LANE

CAMARILLO, CA 93012

Quantity Total	15	2
Price	26.00	0.00

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MM CASH GROUP COMPLIMENTARY -

Advanced Group Rate

Beginning No.

Ending No.

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