

MASTER

FINAL REPORT

DOE - UNIVERSITY OF ARIZONA FACULTY DEVELOPMENT PROJECT

SPONSOR NUMBER DE-FG01-791R10238

University of Arizona Project Number Acct. 857212

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Submitted: 8 September 1980
Joseph M. Fillerup,
Project Director

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FINAL REPORT

DOE - UNIVERSITY OF ARIZONA FACULTY DEVELOPMENT PROJECT

The DOE - University of Arizona Faculty Development Project on Energy successfully completed a faculty development program. There were three phases of the program consisting of: a three week energy workshop for teachers, participation and cooperation with Students for Safe Energy in presentation of an Alternative Energy Festival at the University of Arizona, and workshops for teachers conducted at Flowing Wells School District. Each of these is described below.

1. A three week Seminar Energy workshop was the most significant accomplishment of the faculty development project. Twenty individuals participated in the workshop.

Discussion leaders for the workshop were University of Arizona faculty members who had expertise in a specific area of energy. The Science Curriculum Coordinator for Tucson District #1 supplemented lectures and the more formal presentations with "hands on" experiments and projects that teachers could take back to their classrooms and do with children. The DOE had supplied large quantities of resource materials for the workshop. The lectures, the "hands on" experiments and getting acquainted with energy resource materials from DOE and other sources all contributed to the success of the workshop. A listing of workshop staff is given below. Energy workshop programs are in the appendix.

Staff and their affiliation for the three week workshop were:

Dr. Thomas Rehm - Professor Chemical Engineering

Dr. Phillip Bryson - Acting Head Economics Department

Mr. Nile Jones - Geologist, Geothermal Group

Dr. Roy G. Post, Professor of Nuclear Engineering

Mr. S. Daniel Schwartz - Pima College

Dr. Reginald Call, Department of Electrical Engineering

Pat Wing, Arizona State Energy Program

R. Larry Medlin, Architectural College

Dr. John Peck, Project Engineer, Environmental Engineering Lab.

Dr. Dennis Larson, College of Agriculture

David Smith, Science Coordinator Tucson District #1

2. The Alternative Energy Festival conducted at the University of Arizona, April 17-20 presented an opportunity to offer faculty development programs to teachers and others in attendance. This program involved cooperation with the Students for Safe Energy. The DOE Faculty development project provided resource people for various presentations during the Festivals. This endeavor was successful in providing information to teachers and others who were interested in the conservation, utilization, and development of energy resources. General sessions of the Festival had two hundred plus in attendance. The workshop sessions varied in attendance from 15 to 45 people. Program announcements for the Alternative Energy Festival are in the appendix.

3. Faculty Development Programs in Schools.

Faculty development programs were conducted in the Flowing Wells School District at the Davis School. Topics for these programs were: "Solar Heating and Cooling Techniques - Getting the Message to Children" presented by Dr. John Peck, project engineer, Environmental Research Laboratory and (2) "Nuclear Energy - Safe and Sane" presented by Dr. Barry Ganapol of the Nuclear Engineering Department, University of Arizona. These programs were well received. Attendance was approximately 20-25 teachers at each session. Program announcements are in the appendix.

Attendance, Teaching Assignments and Affiliations.

The attendance, teaching assignments and affiliations of the participants are given below for the three major thrusts of the DOE University of Arizona Faculty Development project.

1. University of Arizona Energy Workshop for Teachers

June 16 - July 7. See attached list, page 3a.

2. Alternate Energy Festival - Attendance

The Alternate Energy Festival format provided for participation by any interested person; therefore participants were from many sectors of the public. The sessions and the attendance for the sessions are listed below.

Thursday, April 17, 1980

Topic	Attendance
Solar Home Design	20
Energy from Tumbleweeds	30
Solar Energy: Today and Tomorrow	17

Energy Workshop
Wednesday, 18 June

Teaching Assingment	Affiliation
Intermediate	Sunnyside
4th	Steele - TUSD
3rd	Liberty, Sunnyside
2nd	Liberty, Sunnyside
1st	Mission, Sunnyside
Home Bound	TUSD
4th	Not teaching
College Sr.	Not teaching
7-8 Grade	Townsend Jr. High TUSD
6th	Marshall - TUSD
6th	Mission, Sunnyside
4th	Cragin - TUSD
2nd	Thornydale School Mara
4th	Thornydale School Mara
Grad. Student	
High School	Sunnyside H.S.
3rd	Lineweaver, TUSD
3rd	Esperanza, Sunnyside

Friday, April 18, 1980

Topic	Attendance
Applications of Geothermal Energy	19
Coolidge Solar Irrigation Project	15
Energy Efficient Homes	28

Saturday, April 19, 1980

Solar Energy - The Past, Present and Future	15
Everything You Want To Know About Solar Energy	8
Solar Greenhouse/Porch	45
Biomass Energy	45
How to Buy a Solar Water Heater	30
Solar Energy - Today and Tomorrow	15
Do It Yourself Solar Water Heater	20

Sunday, April 20, 1980

Beyond the Energy Crisis	20
Edward Abbey - Views on Energy	200
Ed Gabel	200

3. The Faculty Development Workshops at Davis School, Flowing Wells School District had 20-25 Kindergarten - Sixth Grade Teachers from Davis, Douglas, and Laguna Schools present.

DOE PARTICIPANT EVALUATION SHEETS

DOE evaluation sheets were forwarded to the DOE office after the three week workshop.

DIRECTOR'S EVALUATION

The three week Energy Workshop was a tremendous success. The resource people from the geothermal group, architecture, economics, Arizona State Energy programs, and the electrical, chemical, and nuclear engineering departments of the University brought sophisticated expertise to the program. Participants were pleased with the presentations and the way lectures were organized to communicate to the less informed on energy matters.

The Science Coordinator from Tucson School District #1 provided interesting and appropriate "hands on" energy experiments and demonstrations that teachers could incorporate into their classrooms. An outstanding feature of the Science Coordinators experiments was his demonstrations of energy concepts using inexpensive and easily assessable materials; thus, demonstrating how teachers could utilize the experiments without expensive sophisticated equipment.

Advertising for the three week energy workshop was done by circulating one thousand announcements throughout the local area. Science and curriculum coordinators for the school districts in the area were contacted given announcements and encouraged to give support for the workshop. The Alternative Energy Festival was advertised by distribution of 5000 announcements, radio and TV announcements, and publicity coverage in the local papers. Attendance estimates for the Festival are from 1500 to 2000 people who came to the displays and/or participated in the energy seminars. Many teachers participated, however, the Festival was open to the public.

The most difficult phase of the project was attempting to get schools to participate in on going workshops. Superintendents had given verbal support but attempts to organize through the Superintendents offices were discouraging. Attempts to establish workshops at the individual school level were met with enthusiasm but the delay caused by the first attempts to organize at the Superintendents level caused scheduling problems. Future attempts should be more successful.

The objectives of the DOE University of Arizona Faculty Development project were met. Large numbers of teachers attended energy seminars and workshops. Much DOE and other materials concerning energy were disseminated.

It has been a pleasure to be involved in the DOE faculty development project. I wish to express my appreciation for the fine support and cooperation given by DOE personnel.

APPENDIX

1. Program Schedule Three week Energy Workshop for Teachers.
2. Alternative Energy Festival Program.
3. Energy Workshop - Flowing Wells School District.
4. Partial registration lists - Alternative Energy Festival.

Department of Energy - University of Arizona Energy Workshop - Education 6597h - 3 credits
 June 16 - July 7, 1:00 - 4:00 pm.

June 16 Overview of World Energy Resources and Utilization. Basic Laws of Thermo Dynamics. Fossil Fuels.	June 17 Fossil Fuels: Distribution of resources, magnitude, future potential, natural precursors. Ind. Exp: Properties of raw and refined fuels Coal Combustion char.	June 18 Fossil Fuels: Processing from raw state to environmentally acceptable form: Petroleum, Natural Gas, Coal, tar sands, oil shale. Ind. Exp.	June 19 Energy: The Economic Picture. Dr. Phillip Bryson Acting head-Economics Dept	June 20 Geothermal: Application, State of the Art High-Low Temperature Site Specific - Arizona Environmental Problems Subsidence and legal prob. Federal Programs Nile Jones, Geologist
DR. THOMAS REHN - PROFESSOR OF CHEMICAL ENGINEERING	DR. THOMAS REHN - PROFESSOR OF CHEMICAL ENGINEERING	DR. THOMAS REHN - PROFESSOR OF CHEMICAL ENGINEERING	DR. THOMAS REHN - PROFESSOR OF CHEMICAL ENGINEERING	DR. THOMAS REHN - PROFESSOR OF CHEMICAL ENGINEERING
June 23 Nuclear Energy: History and present status: U.S. and World	June 24 Risks: real & perceived: Environmental, Mining & Processing, Power Plant(Safety), Waste Management, Political, Proliferation, Sabotage, Economic, Cost of Electricity, "Fringe Benefits"	June 25 Nuclear Energy: Description of Reactor Types; LWR'S - BWR & PWR, HTGR, LMFBR, GCFR. Fussion: Prospects, timing, approaches.	June 26 Solar Energy: Photovoltaics: through film, single crystal, concentration systems, space. Dr. Reginald Call, Electrical Engineering	June 27 Solar Thermal Electric Systems: Bio Mass - Waste materials, Farms, Process heat, Agriculture-Industrial Solar Energy, Winds, Ocean thermal, Photo chemical, Total systems, Research Scientist, Coll. of Ag.
ROY G. POST, PROFESSOR OF NUCLEAR ENGINEERING	ROY G. POST, PROFESSOR OF NUCLEAR ENGINEERING	ROY G. POST, PROFESSOR OF NUCLEAR ENGINEERING	ROY G. POST, PROFESSOR OF NUCLEAR ENGINEERING	ROY G. POST, PROFESSOR OF NUCLEAR ENGINEERING
June 30 Energy Conservation Pat Wing Arizona State Energy Program	July 1 Energy Efficient Homes Kenneth N. Clark College of Architecture	July 2 Visit Solar Homes or Experiments of College of Architecture. Kenneth N. Clark	July 3 Solar Heating & Cooling: a. Water, b. Space heating, c. Space cooling. Dr. John Peck, Project Engineer, Environmental Engineer Lab.	July 7 Examination and Development of Teaching Materials.

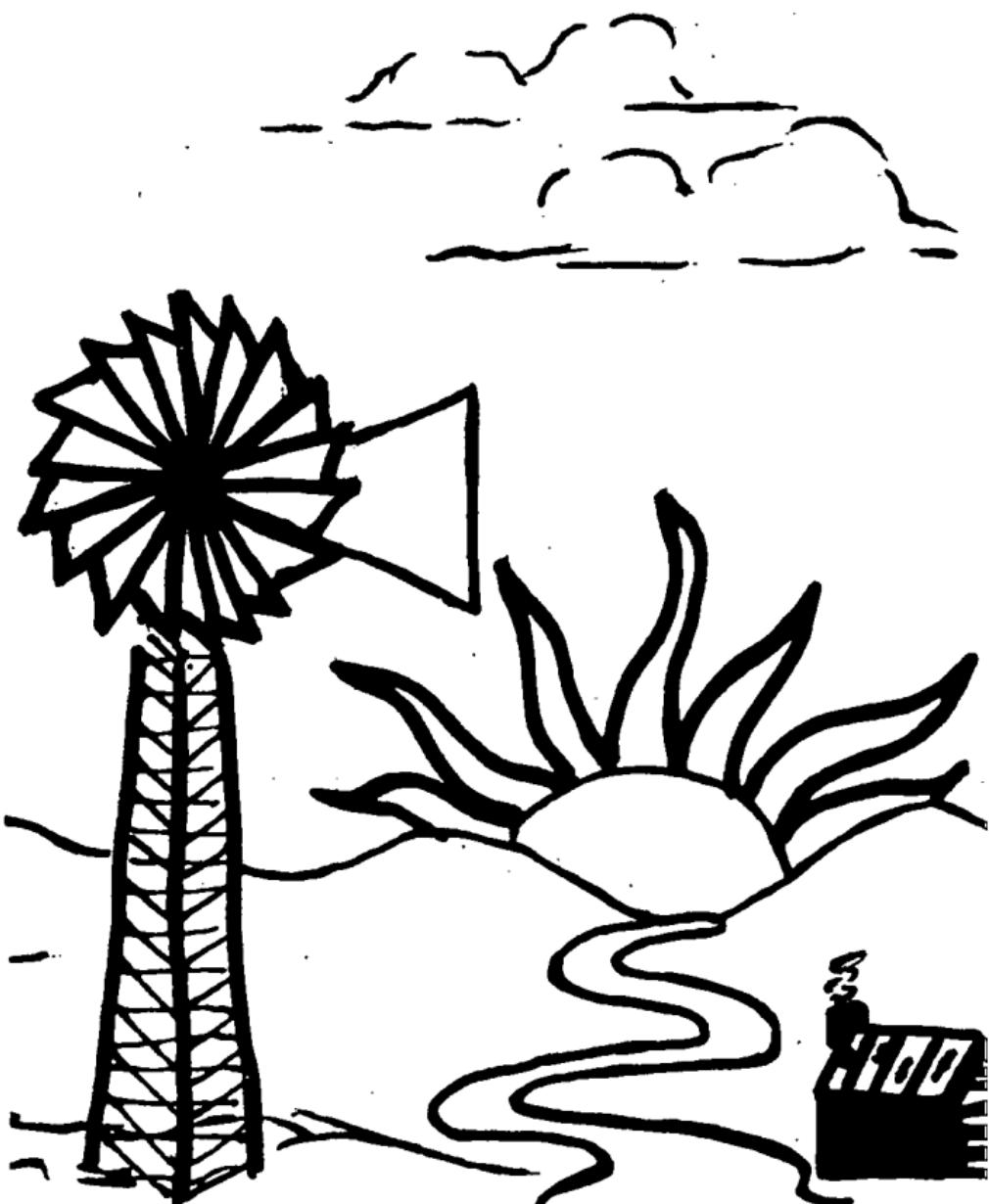
One-half to two thirds of the time will be devoted to lectures and discussions of energy resources and utilization. The remainder of the time will be devoted to the examination and development of Teaching Materials. Dr. David Smith, Science Coordinator Tucson #1, will assist with Educational Materials

University of Arizona
 Dr. Joseph Fillerup
 Phone - 6265337

ENERGY WORKSHOP for TEACHERS

STUDENTS FOR SAFE ENERGY

— Presents —



**ALTERNATIVE
ENERGY
FESTIVAL**

**University of Arizona
APRIL 17 — 20**

We would like to thank the following people for all their support and assistance in making this festival possible:

ASUA

Arizona Energy Extension Service
Clare's Cafe, 1139 E. 6th Street
Dr. Joseph Fillerup, College of Ed.
Food Conspiracy
Metropolitan Energy Commission
New West Trails
Saguaro Alliance
University of Arizona —
participating faculty

STUDENTS FOR SAFE ENERGY
is a non-profit, University of Arizona student group. The group formed in the Summer of 1979 and has been working to promote alternative and safe forms of energy.



Our reliance on non-renewable energy sources has been a major factor that has hindered the growth of our economy. The times are changing. We do have alternatives. Solar, wind, geothermal and biomass energy have always been available on this planet. It has taken us until now to devise methods for efficiently using these forms of safe energy.

In this **ALTERNATIVE ENERGY FESTIVAL** we have attempted to demonstrate renewable energy sources and educate the public about their feasibility. We hope that this festival will be an enjoyable way to learn.

Displays ranging from industrial solar projects to "backyard" technology will be available throughout the four-day event. Solar ovens and dryers, a wind generator, adobe brick construction, a solar greenhouse, and a methane digester will be some of the displays at the McKale Field on the University of Arizona campus.



A FEW HIGHLIGHTS OF THE FESTIVAL WILL BE:

- Author Edward Abbey speaking Sunday afternoon in the Gallagher Theater, followed by
- A performance by Ed Gabel of the Invisible Theatre in the role of Rev. Isaac Nuke
- Free food samples (soy ice cream, cheesecake, hot tofu and tempeh sandwiches) will be given away each day at noon from the soybean concession stand.
- Acoustical music for your entertainment while viewing the exhibits at McKale Field

The entire festival is free and open to the public. Come on out and enjoy the sun.

STUDENTS FOR SAFE ENERGY

THURSDAY — APRIL 17

noon **Exhibits Open**
Displays of energy products and projects on McKale Field. Free food samples at the soybean concession stand.

2:00 pm **Solar Home Design**
Larry Medlin will discuss the advances in architectural design of active and passive solar homes. Student Union room 280

3:00 pm **Energy From Tumbleweeds**
Martin Karpiscak will talk about biomass technology, particularly the Russian Thistle biomass project. Student Union room 280

4:30 pm **Solar Energy: Today and Tomorrow**
Dr. Reginald Call will give an overview of solar energy. College of Education room 441 (DOE sponsored workshop for teachers)

FRIDAY — APRIL 18

noon **Exhibits Open**
Display of energy products and projects on McKale Field. Free food samples at the soybean concession stand.

2:00 pm **Applications of Geothermal Energy**
Thomas Maddock will discuss the uses, benefits and risks of geothermal energy. Modern Languages room 304

3:00 pm **Coolidge Solar Irrigation Project**
Dr. Dennis Larson has been active in the development of the Coolidge Solar Project and will explain the the concept of the project. Modern Languages room 304

4:30 pm **Energy Efficient Homes**
The College of Architecture staff will discuss energy efficient home designs. College of Education room 331 (DOE sponsored workshop for teachers)

SATURDAY — APRIL 19

10:00 am

Exhibits Open

Displays of energy products and projects on McKale Field. Free food samples at the soybean concession stand.

Solar Energy — The Past, Present and Future

John Kimball of the Arizona Solar Energy Commission will discuss solar activities in Arizona with a film, lecture and slide presentation. Gallagher Theater

Everything You Want to Know About Geothermal Energy

W. Richard Hahman and Nile Jones will discuss geothermal energy. College of Education room 331 (DOE sponsored workshop for teachers)

11:00 am

Solar Greenhouse/Porch

John Peck of UA Environmental Research Lab will discuss an energy efficient solar greenhouse-porch combination. Gallagher Theater

11:45 am

Biomass Energy

Doug Williams will talk about biomass energy and the methane converter he works with at the UA Campbell Avenue Farm. Gallagher Theater

1:00 pm

How to Buy a Solar Water Heater

Arizona Energy Extension Service will explain how to purchase and use solar water heating systems. (2½ hours) Gallagher Theater

Solar Energy — Today & Tomorrow

Dr. Reginald Call will give an overview of solar energy. College of Education room 331 (DOE sponsored workshop for teachers)

4:00 pm

Do-It-Yourself Solar Water Heater Assembly and Installation

Charles Glickman will demonstrate a solar system kit and show slides and a film about the Pima College do-it-yourself course for homeowners. Gallagher Theater

SUNDAY — APRIL 20

10:00 am

Exhibits Open

Displays of energy products and projects on McKale Field. Free food samples at the soybean concession stand.

Beyond the Energy Crisis. . .

A New Era

Dr. Rocco Fazzolare will present a slide show and discuss an optimistic outlook of our energy situation. Gallagher Theater

1:00 pm

Edward Abbey, writer and social satirist, will present his views on the energy situation and our need for alternative energy sources in a short talk at the Gallagher Theater.

1:30 pm

Ed Gabel, of the **Invisible Theatre**, will perform a humorous monologue of Rev. Isaac Nuke. Gallagher Theatre

2:00 pm

How To Build a Solar Oven

Pat Ebrom will conduct a workshop on building a solar oven from a cardboard box. Working models will be on display.

All day Sunday the Food Conspiracy will sponsor a celebration of **EARTH DAY**. Informative talks, music, dance and demonstrations will be part of the events held on McKale Field.



MPIRG/cpf

ENERGY WORKSHOP for TEACHERS

Sponsored by

U. S. DEPARTMENT OF ENERGY

College of Education, University of Arizona

in conjunction with

ALTERNATIVE ENERGY FESTIVAL

APRIL 17, 18, 19, 20, 1980

organized by Students for Safe Energy

<u>Title</u>	<u>Resource Person</u>	<u>Time</u>	<u>Place</u>
"Solar Energy - Today and Tomorrow"	Dr. Reginald Call Dept. Electrical Engineering	4:30-6:00 P.M. Thursday April 17, 1980	Room 441 College of Education
"Energy Efficient Homes"	Kenneth N. Clark, Architect, College of Architecture	4:30-6:00 P.M. Friday April 18, 1980	Room 331 College of Education
"Everything you Want to Know About Geothermal Energy"	Nile U. Jones, Geologist, Geo- thermal Group	10:00-11:30 A.M. Saturday April 19, 1980	Room 331 College of Education
"Solar Energy - Today and Tomorrow"	Dr. Reginald Call Dept. Electrical Engineering	1:00-2:30 P.M. Saturday April 19, 1980	Room 331 College of Education

* Individuals can participate in one or all three of the workshops ----
Adults, who are not teachers, are also welcome.

ENERGY WORKSHOPS

HOMER DAVIS SCHOOL LIBRARY

APRIL 8 AND 15TH, 1980

2:30-4:00 P.M.

Sponsored by

U. S. DEPARTMENT OF ENERGY

College of Education, University of Arizona

and

Flowing Wells Unified District #8

<u>Title</u>	<u>Resource Person</u>	<u>Time</u>
"Solar Heating and Cooling Techniques- Getting the Message to Children"	Dr. John Peck, Project Engineer Environmental Research Laboratory	2:30-4:00 P.M. Tuesday April 8, 1980
"Nuclear Energy- Safe and Sane"	Dr. Roy G. Post, Professor Nuclear Engineering, University of Arizona	2:30-4:00 P.M. Tuesday April 15, 1980

Joseph M. Fillerup
College of Education
Phone: 626-5337

Paul Kosmides

Kenneth N. Clark - "Energy Efficient Homes"
Friday, April 18, 1980

Please give the following information

Name

School and District
or address

John W. Waite

Becky Hugle

Steve Flores

Everardo Flores

Maria S. Maytorena

Bill Mafforena

Daleigh Watkins

Sally Freund

Jerry Freund

Pat Wing

Joanna Hallett

Jane Warner (Jane Warner)

Nikle Gardner

Joseph M. Fillings

Dennis Irwin

JALAL SADEGHII

Darlene Mueser

Dyann Clemons

Ron Sallie

BEATRIZ SQUIRRE

Oscar Teller

GABRIEL COVARRUBIAS

Robert Lennau

KEITH LICHTENBERGER

Juan Alvarezara

THOMAS L. LERCHER III

ROBERT P. Dean

STEVE HESING

Camp School TUSD

Tucson Hebrew Academy
Grad students S.A.C.E.

College of Arch. (Ex Program).

Tolson School TUSD

3535 W. MORGAN RD

2202 W
Pima Community College

Not A Student (Designer)

Tucson Med Ctr.

Energy Programs - 1700 W Wash. Phx 85001

P.O. Box 40633, Tucson, AZ 85717

1431 N Sonoyta Tucson AZ 85712

700 Camino de Fray Marcos -

4501 E. Benson Hwy Tucson 85706

3442 N. RICHARD CLE

Tucson 85719

1035 E. Helen St, Tucson, AZ 85719

4909 E. Alta Vista, Tucson 85712

Amphitheater - Prince

2105 E. 5 ST 85716 TUCSON AZ

3200 E. Terra Alta (Architecture)

804 E. 10th ST. TUCSON, AZ 85719

538 North Hoff Ave [THE HOT]

538 N. Hoff Ave "

804 E 10th St Tucson AZ 85719

320 E. 10th ST. TUCSON AZ 85719

TUSD 6051 E 15th St 85711

129 E SMOOT DR. 85719

Paul Kosmides

Solar Energy - April 17, 1980 -

Name

School & District

Pat Wrig

Energy Programs, 1700 2nd Washington
Phoenix Az ~~85013~~ 255-3303

Jane Warner

P.O. Box 40633, Tucson #2 85717

Jim Binkman

624 N. 5th Ave., Tucson Az 85705

Yoss Miller

821A Erickson, # Tucson Unified
School District

Terry Otte

Substitute, District 1 and Sunnyside

Elizabeth Hels

Senior Caf A

Liz Dominguez

Jr. Caf H

Melissa Anderson

Jr. Caf A

Joanne Shay

Gr. Caf A

Charles Smith

Sr. Caf A

Deanna Clemons

teacher, Amphitheater S. D.

Isabella Tillapple

teacher, Amphitheater

Ron Ladlier

teacher - Anglo Dist.

Douglas Brown

College of Engg. SSN 6th St

Debra

Joseph M. Fillings

Mitzi S. Fillings

Geothermal - Nile Jones -

Please sign & designate the
School and District and
Name address -

Dyann Clemons

Amphitheater School District

Alan Kruse

Pima College

Pat Wieg

1700 W. Wash. Phx. AZ. St of C.

Mayo Spitals

Aviemore / Speedway

German Garage

PETER ANDERSON

STUDENT OF U O P A

J. Fullenps

Mitz Fullenps

Sat. April 19

Registration

NAME	ADDRESS	OCCUPATION If a teacher, please give name of school
Jam Bennett	624 N 6th Ave.	teacher, pre-school
A LBERT GWINN	2509 N CAMPBELL	chemical engineer
Murray Fenster	510 N Irvington 85705	Research W.H.
GRAYDON PROPPES	GLENDALE, AZ	ENGINEER, SRP
Jessanne Peoples	4325 Royal Palm Rd, Glendale	85302 ✓ teacher
JOSE L. AGUIRRE	2109 E 5TH STREET	VISITING PROFESSOR COLLEGE - ARCHITECTURE
John Poch	1145 E 4TH ST	Engineer
TED & JOY HESS	11850 WAGON TRAIL RD	RETIRED
Dennis Coker	8000 W. Camino Del Cerro	Producer-Distributor
Leslie Silko	" " " " "	Professor of English
Dee Penning	1010 E MABEL #209	Student ✓
Jane Warner	P.O. Box 40633	Business consultant
Andrea Holmes	325 N. Fremont	85719
E Clonts	5531 S. Sunset Blvd	Student - MKTG. UofA
J. B. Clonts	11	Student - Teacher
JOHN A. Ryberg	9162 E. 38TH ST	Orthopedist
Richard Parkinson	529 S. 6th Ave	PASTOR / OWNER - BUILDER
Nancy Sternbach	711 E. Mabel	student
John Waite		grad student / T.A. Univ of
Chay-gym Fair 2 - Potter pl.		Tempe School TUSD
M/M JAMES F. BONNER		professor
Dale Johnson	11. 6th	Retired Home Bldr.
Daniel J. Blake	1134 N. 1ST Ave.	Student
Susan Siegler	718 Drachman	Student / Clerk
B Wagner	2330 E 45th	Student / ✓
S Lassenti	1232 Drachman	Railroad
Clay Adams	1730 Calle Alvaro	Student
Patricia Smidgway	2109 E 5TH ST	Agri Consultant
STATE & LUCIE BAKER	10530 PRACTICE LANE URGEE 85710	Student in STUDENT RECH ✓
		Student

REGISTRATION

SAT. April 14th

NAME	ADDRESS	OCCUPATION IF TEACHER, PLEASE GIVE NAME OF SCHOOL
Anne Taylor Quinn John C. Conne	P.O. Box 1824, Bisbee, AZ 326 S. GRANDE Tuc	Electrician
Richard White Worck Hall	2212 E. Monte Vista Tuc	ALL
Larry Clark	315 E. ELM Tuc	ALL of Above
Bob Bryant	231 W. University	MR SERVICES
Jim Brinkman	1262 S. CRAVEN Tuc	ENGINEER
STEVE PATRICK	624 N. 5 th Av.	STUDENT
DAVID SANSING	3065 W. SHUMAKER	BIOCHEMIST
Gary Grabowski	GEN. DEL. TUC. 857-2	CASUAL & TEMPORARY
E. Kreuzinger	2610 N. Dodge #1 Tucson	Mason
Ken MacLennan	401 N. Broad Ave. Tucson	Retired Teacher
Marilyn Barker	5152 E. Alberta Dr.	Business Woman
DRVILLE	Nowhere	SLAV
J. W. Patrick	Smugglers Inn	Programmer
Alie O'Leary	P.D. # Cochise Oz	Retired Compt. Artist
John Wilson	P.D. # Cochise Oz	Registered Nurse
Robert A. Bergquist	302 Paseo de GOLF - Valley	Retired Mech Engr
Elsie D. Bergquist	" " "	Housewife
Don Frocklich	1101 W. Navajo St	Bookstore mgr.
Pat Craig	Energy Progs 1700w wash	Phx d2. \$500/7
Craig Angell	2447 E. Mabel. Tuc	Furniture Mover
MIKE WALSH	2626 N. ESTRELLA	TUCSON
Penel Ward	910 W. Schaefer Dr	TUCSON
Richard Bailey	SAME ↑	SAME ↑
George E. Jean Girard	PO BOX 1824 Yuma, AZ	EDA Planning - Quechan Tribe
Jim Sanchez	6002 E. Seneca	Educ. Research Ass't.
Jo Hildebrandt	Tuc-857-12	
O.K. ANDERSEN	503 W. RILLIO LN	HOUSING/INSPIR DMAFB
E.V. MALEKA	8960 E. 140th AV	ENGINEER
Roger Caldwell	1625 E. Klemdale Rd	TEACHER
Chet Moduski	1226 N. TORINO Ave	PIPEFITTER

REGISTRATION

OCCUPATION → IF
TEACHER, PLEASE GIVE
NAME OF SCHOOL

NAME	ADDRESS	OCCUPATION
MATEK MAGELLA	5100 9049 TUC AZ 85720	STUDENT (GFA)
R.L. KOFIRA	531 N. EASTVIEW TUC AZ 85710	M.L. I. B. M.
Terry Otte	5353 E 22nd Apt 926 TUC AZ 85710	Math Teacher / Sub
Jack A. Cohen	7620 E. Hampton Pl. 85715	Architect (GCA)
Lysle T. de Lambert	Rt 1 LCM 620 Point Lookout	Retired Eng.
W. Hall Shultz	111 C. Pennington	City of Tucson Dept. Support
S. SCHLANGER	4310 N. ALVERNON	TAX PRACTITIONER
D. H. CONNER	4643 E. 15 th ST.	Doct - M.D.
Don Braun	2918 E. 27 th ST.	Electronic technician
joyce Testa	2832 N Estrella	Student
Mike Comora	Same	Student
Steve Sterretta	3150 N. Country Club	Journalist
Collie Eastman	232 W Knob	Programmer
T.J. Harrison	4901 W. Placita de los Vientos 85705	Lawyer / Lobbyist
Norman Soifer	1433 E. Hedrick Dr. 85719	Entomologist
Verna Dailed	1776 S. Palo Verde 8-10	Salesclerk
J. A. Sayre	Green Valley AZ	Retired
Steve Rogers	1443 N. MAGNOLIA	Museum Registrar
Ennis Towne	4501 E. Benson Hwy	
Joe Bustamante	1300 E 6 th 85719	Manfeld Dr H. S.
W. D. Berkley	5432 N. Penasco	Interested
AVIS M. SPALDING	8818 19 ROCK RD 85638	BUSINESS
John Galan	2315 W. ABON WIL. 85705	ELECT. & GFAK
John Galan	4071 E. 31 st	Builder
John Galan	335 N. Cheyenne	Student
C. Wayne Dickey	7131 N. Montebello Rd.	Field Engineer / Housing
T.R. & V.R. KUNTZ	2470 E. Calle de Posada	anthropologist
G. KRUTZ	484 S. Convent	Student
Robert Karon	484 S. Convent	Student
L. Keecher	2612 E. Drachman	Planner
Mike Evans	1. C. N. Dept. of Entomology	Student
Mohamed NALIK	11. N. 4 th	

<u>NAME</u>	<u>ADDRESS</u>	<u>OCCUPATION</u> : If teacher, please give name of school
Chris Sanders	Dpt S.W.E., UofA	Boz Research
Rob Dvorak	Coll Arch UofA	
Ralph Jombasec	U of A	
Felix D. Hembale	5761 Camino del Pecado	Postdoctoral
Tom Lubberman	2028 E. LFR	
Dick Childs	1067 th Miracle Mile #1	
W. A. Cunningham	RR8 Box 3270 Tucson AZ	
Stan Healy	54 PO 9144 Tucson AZ	
F. Cristoff	1126 N. SWAN RD, TUCSON, AZ. 85712	
R. W. TAPPER	2040 PAINTED HILLS RD TUCSON AZ	
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