



MANOS 2014

Location: Rio Grande High School
2300 Arenal Rd SW

Dates: Tuesday/Thursday
April 22 – May 15, 2014

Times: 4 PM to 6 PM

Registration Deadline:
April 10, 2014

Great Minds On The Move!
<https://share.sandia.gov/stem/manos/index.html>

What is Manos?

Manos Hands-on Science and Engineering Program is an educational supplement targeting Hispanic middle school students. The Program is sponsored by Sandia National Laboratories' Hispanic Leadership Outreach Committee, Diversity, Community

Involvement, EEO & AA and Albuquerque Public Schools. This program is designed to introduce Science, Technology, Engineering, and Math (STEM) concepts to middle school students and spark their interest in pursuing careers those fields. This program is offered each spring for students in grades 6th - 8th. Students and parents are encouraged to participate and volunteer.

What is the purpose of the Manos Program?

- Develop awareness and pride in accomplishments of Hispanic professionals and inventors.
- Increase the pool of Hispanic students who pursue degrees in STEM.
- Support the development of a scientific and technically trained student-base with hands-on technology experiences.

Registration Deadline: April 10, 2014

Fax Completed Forms to: Miquelita Carrion at 505.284-9779

Workshops:

Manos provides students the opportunity for early high-tech business involvement with local communities. Young minds are inspired through engineering and scientific experiences. The focus is to increase and promote student academic excellence at the precollege level. Manos nurtures “hands-on” science, technology, engineering and math experiences primarily for Hispanic students, but open to all students. Manos works to improve students’ academic rate of success and personal self-esteem. The Manos Program continues to foster and expand awareness of self-respect for the contributions and achievements of Hispanic inventors and scientists. Through interdisciplinary activities, “Great Minds” and “Creative Thinkers” are excited about their future.

What kinds of classes will students take?

- **Physics** - How does a rocket fly? Why does the light turn on when I flip a switch? How does a rollercoaster work? Can I drop an egg and not break it? Learn the answers to these questions and more by conducting experiments in force, mass, energy, friction, momentum, aerodynamics, heat and magnetism.
- **Chemistry** - How do they make fireworks different colors? What makes bread rise? Is shampoo really “pH balanced” like the commercials say and are all sunscreens the same? How does chemistry help to investigate a crime scene?
- **Electronics** - What is a component? What is integrated circuitry and how does it work? What makes a computer work? Who is *Ohm* and what is it? How is the flow of electricity controlled?
- **Fun with Math & Money** - Can you guess how many Red M&Ms are in a jar? Do you know what PI is? Do you know how to make your money “grow”? This class uses fun games to help you answer these questions and more.
- **Computer Discovery** - Have fun with computers! What makes a computer tick and how can you use it? Take a computer apart. Connect to the internet. Use email to communicate with friends. Build your own personal web page for others to see. Program and control a robot to make it do what you want it to. Scavenger hunt and problem solving.
- **Robotics** - Students learn how to build and program robots and work with *LEGO MINDSTORM KITS*. Students will learn how to make a robot follow a line, how to use touch and light sensors. The students will learn about career pathways in high wage, high technology fields. They will also learn about the importance of teamwork in a competitive environment.
- **Introduction to Engineering** - Are you creative, curious, like to build things or just take things apart and see how they work? Then engineering is for you!!! Like to build cards, try mechanical engineering. Like to build bridges, civil engineering is the place. In each class, you will become a different type of engineer, learn about them, how to become a “real” one and work on a fun activity.

What must a student do to participate in the program?

Students must currently be enrolled in grades 6th through 8th. ***Parents must complete, sign, and return all required forms before being accepted into the program. Students may not begin the program without completed forms.*** There is no cost to the student for attending the program. Students who need special assistance should call the Program Coordinator at 284-1610 prior to the commencement of the program.

Transportation: Students are transported via bus from West Mesa and Rio Grande District Middle Schools free of charge, and MUST be picked up by class dismissal promptly at 6:00 p.m.

Manos Program Application

Please number your preference in order (from 1 to 5).

If your first class preference is filled you will be enrolled in your second or third choice.

6th grade: _____

____ Fun with Math & Money

____ Computers

7th & 8th grade: _____

____ Chemistry

____ Electronics

____ Physics

____ Robotics

____ Introduction to Engineering

Student Name: _____

Student Home number: _____

Date of Birth: month/day/year: _____

Parent(s) Name(s): _____

Students Address: _____

City: _____ State: _____ Zip Code: _____

Home phone number: _____

Parent phone number(s): _____

In case of emergency contact: _____ phone number: _____

School: _____

Grade: _____ 6th _____ 7th _____ 8th

Have you participated in the MANOS Program? Yes No

If yes, which modules have you previously participated?

____ Fun with Math & Money

____ Computers

____ Physics

____ Introduction to Engineering

____ Chemistry

____ Electronics

____ Robotics

The following information is optional and will not affect MANOS Program participation:

Select one: Male Female

Select one: ___ Hispanic ___ Native American ___ African American

___ Asian

___ Other _____

Parent/Guardian Signature: _____

Date: _____

Registration Deadline: April 10, 2014

Fax Completed Forms to: Miquelita Carrion at 505.284-9779