WHAT IS PINHEAD?

MISSION: PINHEAD INSTITUTE EDUCATES AND INSPIRES CHILDREN AND ADULTS IN THE GREATER TELLURIDE REGION ABOUT THE WONDERS OF SCIENCE AND TECHNOLOGY.

HOW WE DO THIS: WE DO THIS THROUGH ENGAGING PROGRAMS, DIRECT INTERACTION WITH SCIENTISTS, AND UNIQUE RESEARCH CENTERED INTERNSHIP EXPERIENCES.

THE PINHEAD INSTITUTE, A 501(C)3 NONPROFIT ORGANIZATION, IS A SMITHSONIAN AFFILIATE, THE FIRST IN COLORADO.
WHAT WE DO...

• RIDGWAY, NATURITA/NUCLA, NORWOOD, TELLURIDE, OURAY

• REACH OVER 5,000 STUDENTS EACH YEAR

• PROVIDE NEARLY 8,000 HOURS QUALITY SUPPLEMENTAL SCIENCE PROGRAMMING

• SUPPORT EXISTING CURRICULUM

• PUT A FACE ON THE SCIENTIFIC COMMUNITY

• ONLY SCIENCE EDUCATIONAL OUTREACH PROGRAM IN OUR REGION

• WE REACH EVERY KID IN EVERY GRADE K-12 EACH SCHOOL YEAR
SCHOLARS IN THE SCHOOLS

• DR. JOHN STRAUB (BOSTON UNIVERSITY)
• DR. MATTHEW PORTEUS (STANFORD UNIVERSITY)
• DR. JOAN SHEA (UNIVERSITY OF CALIFORNIA, SANTA BARBARA)
• DR. RIGOBERTO HERNANDEZ (GEORGIA INSTITUTE OF TECHNOLOGY)
• DR. MICHAEL OTTE (MASSACHUSETTS INSTITUTE OF TECHNOLOGY)
• DR. CHRISTOPHER CROCKETT (ASTRONOMER, U.S. NAVAL OBSERVATORY)
• DR. MARK VARIEN (CROW CANYON ARCHAEOLOGICAL CENTER)
• DR. RON ESTLER (FORT LEWIS COLLEGE)
• DR. ANDREW BERRY (HARVARD UNIVERSITY)
• DR. ROSEMARY WHITE (BOSTON UNIVERSITY)
• DR. TERRY ERWIN (CURATOR OF ENTOMOLOGY, SMITHSONIAN MUSEUM OF NATURAL HISTORY)
• DR. JULIE COLE (UNIVERSITY OF ARIZONA, TUCSON)
• DR. JOHN STEINBERG (UMASS, BOSTON)
• JOE TANNER (NASA ASTRONAUT, RETIRED)
• DR. SUSAN DESENSI (BOSTON UNIVERSITY)
PINHEAD INTERNSHIP PROGRAM

UNIVERSITY OF CALIFORNIA, SANTA BARBARA
BURATTO GROUP
SANTA BARBARA, CA

MONTANA STATE UNIVERSITY
DEPARTMENT OF ANIMAL & RANGE SCIENCES
BOZEMAN, MT

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
GABRIELLI LABORATORY, DEPARTMENT OF BRAIN & COGNITIVE SCIENCES
BOSTON, MA

SMITHSONIAN INSTITUTION, NATIONAL MUSEUM OF NATURAL HISTORY
DEPARTMENT OF PALEOBIOLOGY
WASHINGTON, D.C.

UNIVERSITY OF CALIFORNIA, SANTA BARBARA
MARINE SCIENCE INSTITUTE
SANTA BARBARA, CA

CALIFORNIA ACADEMY OF SCIENCES
DEPARTMENT OF ORNITHOLOGY & MAMMALOGY
SAN FRANCISCO, CA

BOSTON UNIVERSITY
ORTHOPAEDIC AND DEVELOPMENTAL BIOMECHANICS LABORATORY
BOSTON, MA

NASA Ames Research Center
Moffett Field, CA

SMITHSONIAN NATIONAL MUSEUM OF NATURAL HISTORY
DEPARTMENT OF VERTEBRATE ZOOLOGY, DIVISION OF MAMMALS
WASHINGTON, DC

TEXAS A&M UNIVERSITY
VETERINARY MEDICAL TEACHING HOSPITAL
COLLEGE STATION, TX

SMITHSONIAN NATIONAL ZOO
CHEETAH CONSERVATION STATION
WASHINGTON, D.C.

UNIVERSITY OF ARIZONA, DEPARTMENT OF GEOGRAPHY
INVESTIGATING NORTH AMERICAN MONSOON VARIABILITY IN THE SW USA USING INSTRUMENTAL & TREE RING DATA
TUCSON, AZ

ANDES TO AMAZON BIODIVERSITY PROGRAM
BOTANY PROJECT
QUINCE MIL, PERU

BOTANICAL RESEARCH INSTITUTE OF TEXAS
FT. WORTH, TX

STATE UNIVERSITY OF NEW YORK AT STONY BROOK
THE SIMMERLING GROUP
STONY BROOK, NY

THE INSTITUTE FOR MUSIC & BRAIN SCIENCE
JOINT PROJECT WITH HARVARD FACULTIES OF MEDICINE AND MASSACHUSETTS GENERAL HOSPITAL
BOSTON, MA

WOOSTER HOLE OCEANOGRAPHIC INSTITUTE
DEPARTMENT OF MARINE CHEMISTRY AND GEOCHEMISTRY
WOOSTER HOLE, MA

UNIVERSITY OF CALIFORNIA, SAN DIEGO
MCCAMMON GROUP
SAN DIEGO, CA
PINHEAD PUNK SCIENCE

- ENERGETIC ELECTRONS AND MAGIC METALS
- RADICAL REACTIONS WITH COMBUSTING CHEMICALS
- SPECTACULAR SOUNDS AND SCIENTIFIC SMELLS
- RIP ROARING RADICAL ROCKETS!
- COOL CHEMISTRY FROM YOUR CABINETS: HOMEMADE SCIENCE
- POLYMERS AT THEIR PRIME!
- GALACTIC GLEE AND GLACIAL GAS
- MARVELOUS MOLECULES OF WACKY WATER
- PECULIAR PARASITES AND BODACIOUS BUGS
- FUN WITH FOOD: CRAZY COOKING CHEMISTRY
- SIZZLE...BANG...BOOM!
- UNDER PRESSURE: FUN WITH AIR AND NO AIR
- HOW COLD CAN YOU GO: SPECTACULAR SPACE SCIENCE
- FROM FOOD TO POO: UNRAVELING THE FOOD’S JOURNEY THROUGH THE DIGESTIVE TRACT
OTHER PINHEAD PROGRAMS

- NO SCHOOL SCIENCE PROJECT
- ROCKIN’ ROBOTS LEGO LEAGUE
- TELLURIDE UNEARTHED
- SUMMER SCIENCE CAMPS
- STARGAZING SERIES
- SCIENCE FRIDAYS
- MINECRAFT MANIA
- PINHEAD PACKS
- JITTERBUGS
PINHEAD: SYCCC

- SUMMER CAMP 2012
- GEARED TOWARDS 6TH GRADERS
- 12 KIDS REGISTERED/ATTENDED
- 4 DAY CAMP: 11AM – 2PM
- LIBRARY PROVIDED LUNCH
- FREE!

Control your OWN telescope using the MicroObservatory Robotic Telescope Network

NASA's space science researchers control some of the world's most sophisticated space probes and orbiting telescopes to get amazing images of objects in space. Now YOU can join them by operating your OWN ground-based "MicroObservatories" - real robotic telescopes that you command through this website!

NATURITA, COLORADO

• LOCATED ON CO/UT BORDER

• POPULATION: 635

• TOTAL AREA OF 0.7 SQUARE MILES

• FORMER URANIUM MINING COMMUNITY

• MEDIAN INCOME PER HOUSEHOLD: $28,977

• 10.0% OF THE POPULATION ARE BELOW THE POVERTY LINE

NATURITA PUBLIC LIBRARY:
OPENED 2009
4,400 SQUARE FOOT, STRAW BALE, GEOTHERMAL BUILDING
DAY ONE

- INTRODUCTION/DISCUSSION OF SCHEDULED ACTIVITIES
- VOCABULARY ACTIVITY: INTRODUCTION TO BASIC TERMINOLOGY
- TELESCOPE AND THE EYE ACTIVITY
- INTRODUCTION TO MICRO-OBSERVATORY SITE
- IMAGING PROCESSING DEMONSTRATION/DISCUSSION
- SELECTION/CAPTURING FIRST IMAGE
- HOMEWORK ASSIGNMENT
DAY TWO

- HOMEWORK REVIEW/SHARING
- IMAGING PROCESSING ACTIVITY WITH STUDENT SELECTED IMAGES
- PRINT OUT FIRST IMAGES: MOON
- STUDENT PRESENTATION OF PROCESS TO PEERS
- ASTRO-POETRY ACTIVITY
- HOMEWORK ASSIGNMENT
DAY THREE

• VOCABULARY ACTIVITY: INTRODUCTION TO FILTERS
• SELECTION/CAPTURING IMAGE USING FILTERS
• RESEARCH OF SELECTED IMAGE FOR CAPTION
DAY FOUR

- SELECTION OF IMAGE FOR DISPLAY
- IMAGING PROCESSING
- CREATING CAPTIONS/LABELS OF IMAGES
- CREATING EXHIBIT
- STUDENT PRESENTATION OF PROCESS TO PEERS
- WRAP UP/REFLECTION
WHAT WORKED:

• **RIGHT PROGRAM FOR US!**
• **COLLABORATION WITH SMITHSONIAN**
• **SUPPLEMENTAL LEARNING**
• **SUMMER SCIENCE**
• **INCREASED VOCABULARY**
• **MONTH LONG STUDENT EXHIBIT**
• **STUDENT SUCCESS AND RECOGNITION**
• **DIGITAL LEARNING/TECHNOLOGY**
• **ART & SCIENCE CONNECTION**
• **GENERAL MARKETING**
FOR NEXT TIME:

MORE OF EVERYTHING!
THANK YOU!

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