**ASU’S Newly Renovated Zacheis Planetarium Grand Re-Opening Celebration!**

**SAN LUIS VALLEY SCHOOL FESTIVAL**
Featuring Space Foundation Activities and Planetarium Presentations

**Funded by HSI Title V STEM Grant**
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**Friday, September 7, 2012**
Elementary Schools
Pre K—5th Grade
8:00 AM—12 Noon

**Middle/High Schools**
Grades 6—12
1:00 PM—5:00 PM

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### MENU OF ACTIVITIES (30 minutes rotating)—Open to all participants

**Why Explore?** Participants will draw conclusions based on careful observations of fictional planets.
*Suggested Grade Level: 2nd—5th*

**Kinesthetic Astronomy:** Participants will create a scale model of the solar system using the standard system of measurement.
*Suggested Grade Level: Pre K—5th*

**Planetary Lander:** Participants will create a lander that could land on a planetary surface they will create out of household items.
*Suggested Grade Level: Pre K—5th*

**Mass vs. Range Straw Rockets:** Participants will explore the relationship between rocket mass and flight range.
*Suggested Grade Level: 3rd—5th*

**Comets:** Participants will learn about the basic components of a comet and demonstrate how the comet’s head and tail form by building a comet model.
*Suggested Grade Level: Pre K—2nd*

**Cratering and Erosion:** Participants will drop objects of different masses from varying heights creating craters and learn that objects dropped from a greater height, will have more speed, and thus have more force and will create a larger crater.
*Suggested Grade Level: Pre K—2nd*

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### MENU OF ACTIVITIES (45 minutes rotating)—Open to all participants

**Why Explore?** Participants will draw conclusions based on careful observations of fictional planets and decide which one may provide more benefits from exploration.
*Suggested Grade Level: 6th—12th*

**Hydroponic Germinator:** Participants will understand and build a hydroponic growing chamber.
*Suggested Grade Level: 6th—8th*

**Kinesthetic Astronomy—The Phases of the Moon:** Participants will kinesthetically manipulate a simulated moon to observe the changing phases of the moon.
*Suggested Grade Level: 6th—12th*

**Weighing In—Bone up on Bones:** Participants will observe bones, comparing and contrasting structure, function and composition.
*Suggested Grade Level: 6th—9th*

**Pipette Rockets:** Participants will observe the powerful synthesis reaction that occurs with hydrogen gas and oxygen gas.
*Suggested Grade Level: 6th—12th*

**Igneous Rock ID:** Participants will learn the classification of igneous rocks based on their mineralogy and texture and be able to identify the major rock types from hand specimens.
*Suggested Grade Level: 6th—12th*

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Zacheis Planetarium Shows—8:00, 9:00, 10:00 and 11:00 AM
Reserved Seating Recommended—Capacity Each Show: 45

Zacheis Planetarium Shows—1:00, 2:00, 3:00 and 4:00 PM
Reserved Seating Recommended—Capacity Each Show: 45