

# ***Celebrating World Year of Physics - 2005***

## **Physical Science Workshop for Secondary Teachers**

A distance-learning workshop by  
*The Challenger Center for Space Science Education*

**Friday, March 18, 2005**

**12:00 – 3:00pm**

Copper Country ISD Distance Learning Room

**Registration Deadline – March 15, 2005**

*Sponsored by the Western UP Center for Science, Mathematics and Environmental Education  
and the NMU Seaborg Center for Mathematics and Science*

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**Presenters:** Betsy Smith, Challenger Center curriculum specialist  
Dr. Harri Vanhala, Astrophysicist with the Challenger Center

**Content:** Physical science activities that connect science and mathematics standards to space science.

Middle School:

**How Far is Far?** Students apply mathematical models to determine the actual distance to the Sun and the Moon without ever leaving the Earth.

**Sensing the Invisible The Herschel Experiment:** Students reproduce William Herschel's experiment of 1800 and find out that there is radiation other than visible light arriving from the Sun. In this case, they discover the presence of infrared radiation in sunlight.

High School:

**How Old is the Earth?** This lesson allows students to use real data to estimate the age of the Earth based on radioactive dating.

**Cooling with Sunshades** After discussing basic properties of temperature and heat, and different ways in which heat can affect substances, students design a simple protective device (sunshade) against excessive sunlight.

**Cost:** Workshop is free to all teachers in the CCISD and GOISD, lunch will be provided. Participants will receive copies of all lessons.

**Workshop is limited to 30 teachers.**

**To register:** contact Loret Roberts at 906-482-0331 or [loret@copperisd.org](mailto:loret@copperisd.org).

**Questions,** contact Shawn Oppliger at 906-482-0331 or [shawn@copperisd.org](mailto:shawn@copperisd.org)