



## Vanderbilt Dyer Observatory Workshop – Avery Trace Middle School

**September 23, 2016**

**8:00 a.m. – 3:00 p.m.**

**Presenters:** Dr. Billy Teets, Outreach Astronomer, Vanderbilt Dyer Observatory  
Dr. Bob Schweikert, Distinguished Volunteer, Vanderbilt Dyer Observatory  
Rocky Alvey, Director, Vanderbilt Dyer Observatory

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**8:00 a.m. – 8:30 a.m.**

### **Introduction**

- Breakfast
- Introduction to Vanderbilt Dyer Observatory and Staff
- Brief Tour around the observatory

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**8:30 a.m. – 9:30 a.m.**

### **Size Scales – The Solar System and Beyond**

- Introduction to the planets and other bodies of our solar system and their characteristics
- Types of orbits
- How astronomers discover exoplanets
- Create scale models of our solar system and other objects (distances between stars, the galaxy, etc.)

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**9:30 a.m. – 11:00 a.m.**

### **The Sun, Solar Observation, and Eclipses**

- Discuss the characteristics of our own star
- View the Sun safely through our solar telescopes
- Demonstrate ways of safely viewing the Sun in the classroom
- Discuss eclipses, including the upcoming 2017 eclipse, and how to view eclipses safely

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**11:00 a.m. – 11:30 p.m.**

### **Light**

- Introduction to Light
- Introduction to Spectroscopy and Imaging

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**11:30 p.m. – 12:00 p.m.**

### **Lunch**

- Introduction to Star Wheels and Stellarium
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**12:00 p.m. – 12:30 p.m. Star Chamber Visit**

- Visit Dyer Observatory's Star Chamber
- Discuss the seasons and how the Sun's position changes

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**12:30 p.m. – 1:00 p.m. Visit to Seyfert Telescope**

- Discuss how telescopes work
- View Venus through Dyer Observatory's Seyfert Telescope (weather-permitting)

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**1:00 p.m. – 1:45 p.m. Sundials**

- Overview of Sundials (how they work, history, etc.)
- Create simple sundials that can be constructed in the classroom

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**1:45 p.m. – 2:00 p.m. Wrap-Up**

- Final questions, evaluations, etc.
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**Additional Information:**

- In the event of inclement weather, we will have additional activities ready to substitute for activities that require clear skies.
- A small stipend is available to teachers attending the entire workshop. A W-9 form will be made available during the workshop.