



## **Participant Discussion Guide for *Cosmos: A SpaceTime Odyssey***

### **Episode 1: "Standing Up in the Milky Way"**

The creators of *Cosmos: A SpaceTime Odyssey* state that their aim is to promote scientific literacy. We know that many who watch the program may find the blurring of observational, experimental science with historical, origins science confusing. In this study guide for episode one, we emphasize the need for a historical record to correctly interpret times and events that cannot be directly observed using the scientific method.

- 1. You can probably describe where you live using your street address, your neighborhood, your town, your state or province, your country, and your planet. Describe earth's place in the universe.**

**2. What is the scientific method?**

**3. What is the difference between observational, experimental science and historical science? Which one of these is origins science?**

**4. How old do evolutionists believe the universe is? How old does the Bible indicate the universe is?**

**5. How was the idea of a “cosmic calendar” used in this episode?**

**6. How do materialistic evolutionists say life began?**

**7. How does the Bible say life began? Who witnessed life’s beginning? What was the first kind of life created?**



## 11. Do Bible-believing Christians reject science?

### Reaching Beyond

Suppose you do two experiments. For each experiment you need two identical candles (small birthday candles will work well) and a ruler. Measure the candles before you begin and record your measurements. (Kids, don't do this unless an adult assists you!) Write down all measurements and conclusions, as all good scientists do. After reading these two experiments, answer the questions that follow.

#### EXPERIMENT ONE

Let a candle burn for a while and then blow it out. Don't light the other candle; this is the "control." Then, show both candles and the ruler to several people who did not see it burning. Ask them to measure the two candles. Then ask them how long the candle burned.

#### EXPERIMENT TWO

Let a candle burn for a while, but this time write down the time that you lit the candle and the time you blew it out. Don't light the other candle; this is the "control." Then, show both candles, the ruler, and your recording of the times to several people who did not see it burning. Ask them to measure the two candles. Then ask them how long the candle burned.

## **FOLLOW-UP QUESTIONS**

*From the point of view of the people who did not see the candles burning, do these experiments illustrate experimental science or origins science?*

**In which of the experiments will the people who see the candles know how long the candle burned?**

**In which of the experiments do the people who see the candles have a reliable written account of the candle's burning history?**

**In which of the experiments will the people who see the candles be able to accurately predict how long it would take to burn another inch from the candle?**