

FOUNDATIONS OF SCIENCE

WEEK 22—“GOD SAW THAT IT WAS GOOD”

Day 1

Hear:

Scripture tells us that when we study the heavens, we will see the glory of God (Psalm 19:1). Of course, we are to respond to what we see by glorifying Him and thanking Him (Romans 1:19-21). This week, let’s take a look at ways we can study the heavens and learn about some famous scientists who made it their work to study the heavens.

Before starting, each student should look up the following words in a dictionary or online. Write out a *short* definition for each. Place these vocabulary words and definitions into a notebook.

- satellite
- telescope
- reflecting
- refracting

Hear:

- Learn about telescopes. Start at this page, and continue by clicking “next.” Read about seeing space with the human eye, refracting telescopes, reflecting telescopes, radio telescopes, and other means.
<http://csep10.phys.utk.edu/astr162/lect/light/limitations.html>
 - Copy the diagram here for your notebook:
<http://csep10.phys.utk.edu/astr162/lect/light/refracting.html>
 - Copy the diagram here for your notebook:
<http://csep10.phys.utk.edu/astr162/lect/light/reflecting.html>
- Learn about the history of telescopes at these two websites:
 - <http://amazing-space.stsci.edu/resources/explorations/groundup/>
 - <http://ngm.nationalgeographic.com/2009/07/telescopes/telescopes-interactive>

Hear:

- High-school students: Read *The Witness of the Stars*, by E.W. Bullinger (Grand Rapids: Kregel, 1967), pp. 120-196 (“The Third Book: The Redeemer (Second Coming)”).
 - Finish the essay you started in Week 20.

* These page numbers refer to the print version. You may also access a free PDF version of this book online at http://www.lewendwater.org/books/witness/the_witness_of_the_stars_bullinger.pdf.

Day 2

Hear:

- Choose one or more of these scientists, and read a short summary of his life. What discoveries did he make about astronomy? Was he a believer in Yeshua? Make a notebooking page about the scientist you chose. Include a picture of him.
 - Aristotle
 - Nicolaus Copernicus
 - Galileo Galilei
 - Johann Kepler
 - Isaac Newton
 - Wernher von Braun[†]
- If you keep a history timeline, you might consider adding each of the above scientists to your timeline. In addition, add the following dates of the United States space program:
 - 1957 – First artificial satellite, Sputnik, October 4
 - 1958 – First American satellite, Explorer, January 31
 - 1961 – First man in space, Yuri Gagarin, April 12
 - 1961 – First American in space, Alan Shepard, May 5
 - 1962 – First American to orbit the earth, John Glenn, February 20
 - 1968 – First flight to the moon; astronauts photographed the moon from a few thousand feet without landing; backside of the moon televised to the earth, December 24
 - 1969 – First moon landing; Neil Armstrong, followed by Edwin Aldrin, set foot on the moon, July 20
 - 1970 – Apollo 13 moon mission aborted due to oxygen tank failure, April
 - 1976 – First Mars lander, Viking probe, arrives on Mars, July 1
 - 1977 – Voyager 2 launched, September 20
 - 1981 – First reusable spacecraft, space shuttle Columbia, launched April 12
 - 1990 – First space telescope, Hubble Space Telescope, launched
 - 1995 – First sampling of Jupiter’s atmosphere; Galileo probe arrives at Jupiter
 - 1997 – First mobile remote probe on any planet; Rover probe explores Martian surface

Day 3

Keep:

- Watch “Signposts Aloft” (Moody Science Video) at <http://youtu.be/dvsre5rXl7E>.
- Learn more about the Hubble Space Telescope at <http://www.youtube.com/watch?v=nLHqmdw8tU>.
- What impact can believers have on space exploration? Read <http://www.icr.org/article/3770/313/>.

[†] A good resource is <http://www.ministers-best-friend.com/SCIENCE-Von-Braun-Inventor-of-Rockets-Great-Christian--COURSE-CRE-SCI-420.html>.

Day 4

Learn:

- Learn about food eaten by astronauts in space:
 - <http://www.space.com/12274-space-food-photos-astronauts-nasa-meals.html>
 - <http://www.spacekids.co.uk/spacefood/>

Do:

- Try your hand at making your own telescope. Even if you don't have all the equipment, though, or just don't feel like you can accomplish this project, *do* take the time to read about it at <https://stellafane.org/tm/>.

Day 5

Learn:

- What is a satellite, and how are man-made satellites used in our world? If possible, find pictures of satellites and paste them into your notebook, with a description of what they do.

Do:

- Try to see a satellite in the sky at night. These websites can help:
 - http://www.skyandtelescope.com/observing/objects/satellites/Sat-seeing_Tour.html
 - <http://spaceweather.com/flybys/>
- We highly recommend getting a copy of [*40 Nights to Knowing the Sky: A Night-by-Night Skywatching Primer*](#), by Fred Schaaf, and spending 40 nights discussing the glory of God's heavens.

