

Science

Volume 6

How and Why God Created the Universe



The Study of Astronomy

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HOW AND WHY GOD CREATED THE UNIVERSE

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Introduction

Welcome to the exciting study of astronomy! In our previous Science Guidebooks, you have studied and researched about life ON this earth--physiology, chemistry, botany, zoology and geology. Now you have the opportunity to study the vast creations of God that we can see BEYOND the earth.

This will be a thrilling study for you, because God's creations out in space are so visible and beautiful--even if we might not fully understand their origin, age or manner of creation. Nevertheless, mankind has always tried to understand the stars. Serious students of astronomy cannot help but know that it is impossible for the universe to even exist without having a Master Planner. As Paul said:

“For by him were all things created, that are in heaven, and that are in earth, visible and invisible, whether they be thrones, or dominions, or principalities, or powers: all things were created by him, and for him.” (Col 1:16) *

In the book of Hebrews we learn that there are more worlds created than just this earth that we live on. (See Hebrews 1:2) How did all these things come to be? John tells us:

"In the beginning was the Word, and the Word was with God, and the Word was God. The same was in the beginning with God. All things were made by him; and without him was not any thing made that was made. In him was life; and the life was the light of men. And the light shineth in darkness; and the darkness comprehended it not." John 1:1-5)

You will discover in this guidebook that, being mortal and thus somewhat "in the dark," your mind will not be able to comprehend all of God's creations in the universe. His creations are so vast, that you might even feel a little insignificant to Him. With all of those worlds, stars, suns, galaxies and space out there-- you might wonder to yourself, "How could God be aware of little old me? Compared to the universe, I'm less than an invisible speck!"

But we must remember the principle from the scriptures, that we of the human race are created in the very "image and likeness" of God. No other creations of God can claim the privilege of being in His image and likeness, male and female. (Genesis 1:27) The purposes of all of God's creations – even the universe -- revolve around His children. And that includes you.

The article in this introductory material called "Who Was This Jesus?" is a great introduction to the majesty of the Creator of the Universe, as seen through the eyes of the great scholar J. Reuben Clark, Jr., former U.S. Ambassador to Mexico. Serious students will find his writings extremely inspiring and provoking.

** **NOTE:** Unless otherwise indicated, this guidebook uses the King James Version of the Bible when giving scriptural references.*

The Ten Divisions of Astronomy

#1--The Universe

#2--Nebulae

#3--Galaxies

#4--Constellations

#5--Stars

#6--Solar Systems

#7--Comets

#8--Meteors

#9--Moons

#10--Planets

The Ten Divisions of Astronomy and their 58 Vocabulary Words

1--The Universe

clusters
super clusters
light year
quasar
red shift
eternity
infinity

#2---Nebulae

diffuse
nebulae
planetary nebulae

3—Galaxies

elliptical galaxy
irregular galaxy
spiral galaxy
Milky Way

4---Constellations

Big Dipper
Little Dipper
North Star
Zodiac

5—Stars

Absolute Magnitude
Apparent Magnitude
Binary Star
Black Hole
Neutron Star
Nova
Supernova
White Dwarf

#6--Solar Systems

asteroids
gravitation
interplanetary dust
interplanetary plasma
orbit
space travel

#7—Comets

elliptical path
period
Hale-Bopp Comet
Halley's Comet
Tycho Brahe's Comet

8--Meteors

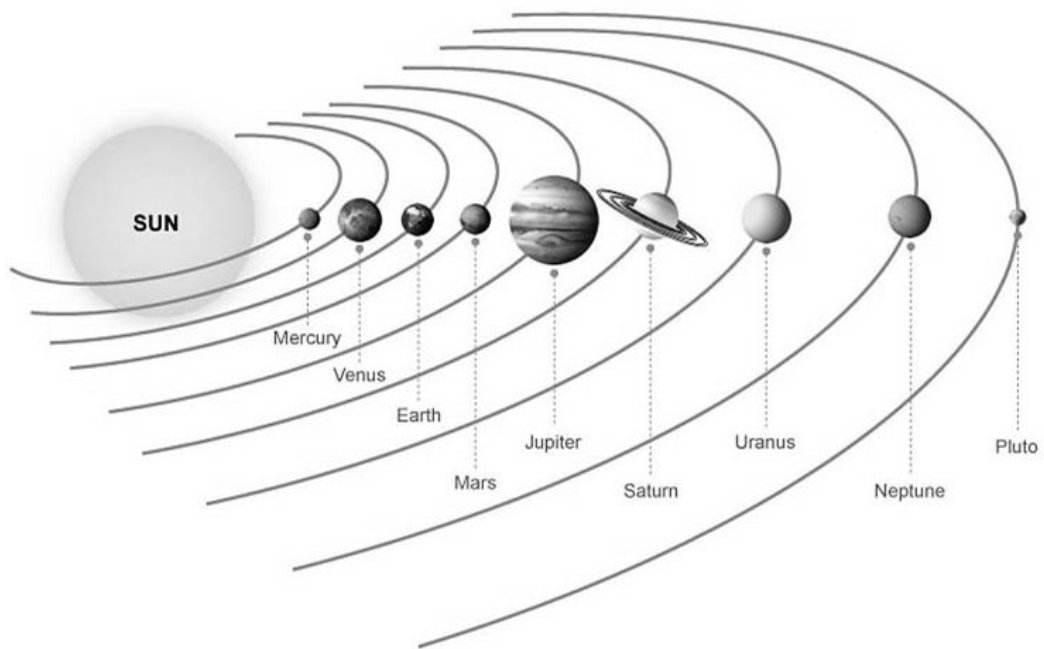
friction
meteorite
meteoroid
meteor shower
crater

#9—Moons

phases
crater
eclipse
rilles
full moon
new moon
earth's tides

#10—Planets

Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune
Pluto



#1

The Universe

God's universe is so incredibly vast that it becomes incomprehensible to the human mind. Yet at times it seems so near that we almost feel an intimate connection with it in our hearts. No doubt you have had occasion to stare up into the night sky at the billions of stars in their various formations. You may have found yourself asking questions like:

- Where did the stars come from?
- Are they organized? How?
- Is there life on other planets? Human life?
- What IS out there, anyway?

As you study this section of astronomy, you will find that some things may be mind-boggling. But there are particular facts about the universe of which scientists and astronomers have become keenly aware. For instance...it is now a proven fact that "where there is space, there is also matter." In addition, scientists have learned from equations like Einstein's theory that "time" is relative--especially out there in God's eternal realm of the universe. Time, space, dimensions. These are all fertile ground for your inquisitive mind.

Check off these directives as you study the vocabulary words below about the universe:

- RESEARCH and DEFINE**
- WRITE and EXPLAIN**
- ILLUSTRATE and LABEL**

clusters

super clusters

light year

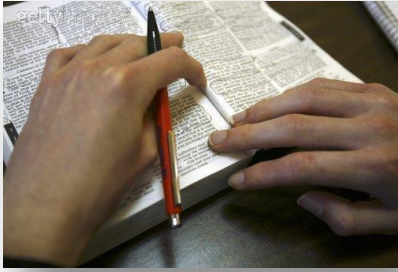
quasar

red shift

eternity

infinity

From the Scriptures



After you have researched, illustrated and defined the major vocabulary words, **GO TO YOUR SCRIPTURES AND RESEARCH THE SPIRITUAL MEANING OF THE UNIVERSE.**

Choose as many words as you like, but do at least five words and write your thoughts and research in your personal astronomy book.

In your scripture index, look up words such as:

- God
- Jehovah
- eternal
- eternity
- infinite
- infinity
- everlasting
- forever
- ever
- create
- creator
- creation
- worlds
- space
- matter
- truth
- light

After you have written your research and observations in your science book, do at least three of the suggested learning exercises on the following page.

Additional Suggested Learning Exercises

(Choose at least 3 about the Universe)

1. Write down the Latin/ Greek meanings of the word "universe." Make a list of other words containing these meanings, and write their definitions. Illustrate one or two.
2. Research the origin of the term "Light Year." Demonstrate to your family or a group the distance of one light year with two objects (such as balls, oranges, etc.), using the ratio of one inch to one million miles (1" = 1,000,000,000 miles). Place the objects one "light year" apart from each other. Write what you discovered in your research and illustrate your "light year" demonstration.
3. Make a diagram showing how the "red shift" is used to measure distances of quasars within the universe (from the earth and from each other).
4. Someone once said, "There is design in everything; therefore there must be a Designer." Write your feelings about this statement.
5. The Bible refers to the universe as "heaven." Look up at least five scriptures that have to do with the creation of heaven and write them down. Choose one of these scriptures and illustrate the "heavens" being created. Use your imagination! Also, use different mediums ...water colors, colored pencils, or oil paints. Write the scripture (or just the reference) somewhere on your picture. Make your illustration an inspiration to others about the Creator of the universe.
6. Research the mathematical symbol for "infinity." Explain in your own words how the symbol is considered "infinite." Name objects around you that have a similar shape to this symbol. Draw one.
7. Research the particles of matter that scientists have been able to discover are out in "space." Write them down, then illustrate at least two, showing their atomic structure.
8. The Bible speaks of "eternal life," "eternal punishment" or "everlasting life," etc. Look up at least ten scriptures that refer to "eternal" or "everlasting." Write the references and then choose one of these scriptures and write your feelings about it.
9. Many students begin to feel insignificant when they study the magnitude of the universe and God's other mighty creations. Read and ponder David's Psalm 8, and write your feelings about this scripture. Write a list of the talents and personality traits you possess which you could use to make this world a better place for others to live in.
10. Create musical themes on an electronic keyboard (or piano) that sound to you like God's creations of the universe. Record it and demonstrate it to your family or group.
11. On a clear night, study the heavens. Think about the Creator and your personal relationship to Him. Write your feelings in your journal.