

SCIENCE 410

UNDERSTANDING GOD'S WONDERFUL CREATION

CONTENTS

I. GOD'S WONDERFUL CREATION	3
Solar System	4
Earth	8
II. GOD'S CHANGING WORLD	16
Matter	17
Water	19
Weather	22
III. MAN'S CREATIVE ABILITY	28
Using Nature's Energy	29
Using Nature's Materials	37
IV. MAN'S CHANGING ENVIRONMENT	44
Ecology	45
Communities	46
Conservation	48

2018 Printing

The material in this book is the product of the Lord's blessing and many individuals working together on the teams, both at Alpha Omega Publications and Christian Light Publications.

Original material copyright ©1978 by Alpha Omega Publications
All rights reserved. Revised by permission.

CLP Revision copyright ©1980

Christian Light Publications, Inc.

Harrisonburg, Virginia 22802

Tel. 1-540-434-0768

Printed in USA

Copyrighted material. May not be reproduced without permission from the publisher.

and their functions. You will also review how a loving God has provided for plants and animals in order that they may serve us and help keep us alive.

SECTION OBJECTIVES

- ☐ **Read these objectives.** When you have completed this section, you should be able:
 1. To tell who created the universe.
 2. To list the planets in their order from the sun.
 3. To explain the difference between astronomy and astrology.
 14. To tell about communities of living things and how the living things depend upon each other.

- ☐ **Restudy these words.**

asteroid	gravity	meteoroid
astrology	habitat	photosynthesis
extinct	invertebrate	vertebrate

SOLAR SYSTEM

God spoke the sun and moon into existence on the fourth day of Creation. The sun, planets with their satellites, and smaller objects called **meteoroids**, comets, and **asteroids**, make up what we call the solar system. He had made the stars, also.

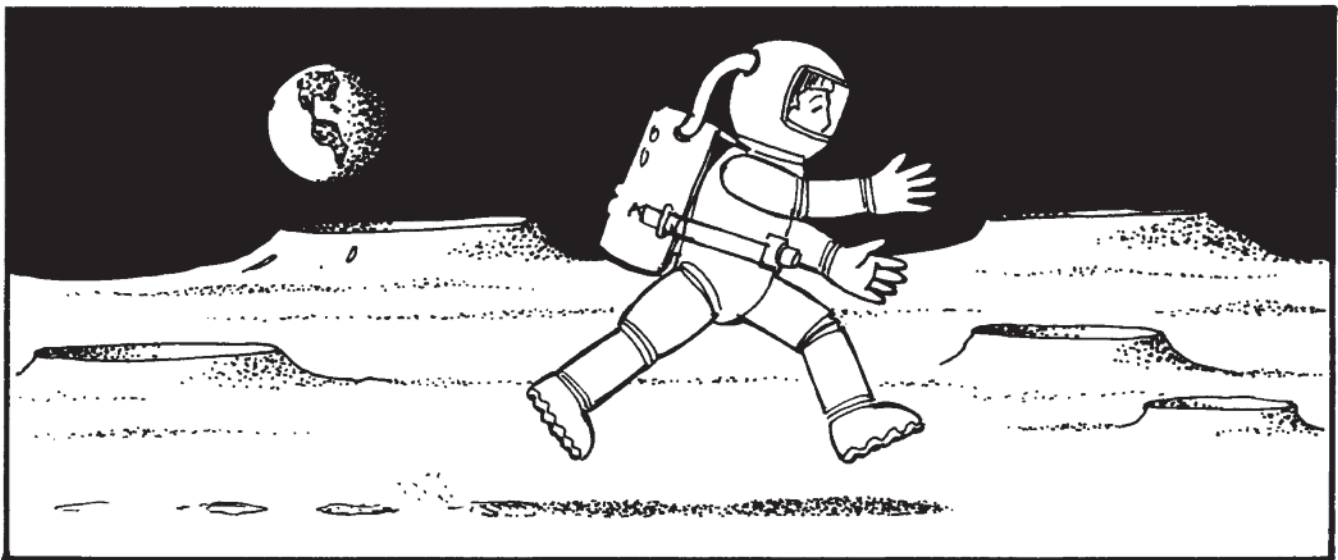
Origin. On the fourth day of Creation God said (Genesis 1:14), "Let there be lights in the firmament of the heaven to divide the day from the night." The Bible account tells us that the lights were to be "... for signs, and for seasons, and for days, and years." God set the sun (Genesis 1:16) in the heavens to be "...

the greater light to rule the day." On the fourth day, God also created the moon. God called it "... the lesser light to rule the night." The Bible tells us that God also made the stars.

Sun. Our sun is a star. It is the center of our solar system. The earth, moon, planets, and smaller heavenly bodies revolve around the sun. Without the sun, life on this planet Earth would be impossible. Without the sun there could be no weather. The tilt of the earth causes our seasons. The heat from the sun moves the air, causing the wind. The sun seems to rise in the east and set in the west because of the rotation of

the earth. The earth rotates once every twenty-four hours on its axis. The revolution of the earth around the sun occurs once every $365\frac{1}{4}$ days. Our year is measured by this revolution. The sun also moves. It spins on its axis and rushes along in the Milky Way at a speed of 43,000 miles (69,187 kilometers) an hour as the whole Milky Way spins on its axis.

Moon. Our nearest neighbor in space, the moon, is about 240,000 miles (386,160 kilometers) from the earth. Since the moon has no air or water, no life is there. The **gravity** on the surface of the moon is only about one-sixth of that on the earth. If a person weighs sixty pounds here on earth, he would weigh only ten pounds on the moon. If he could lift

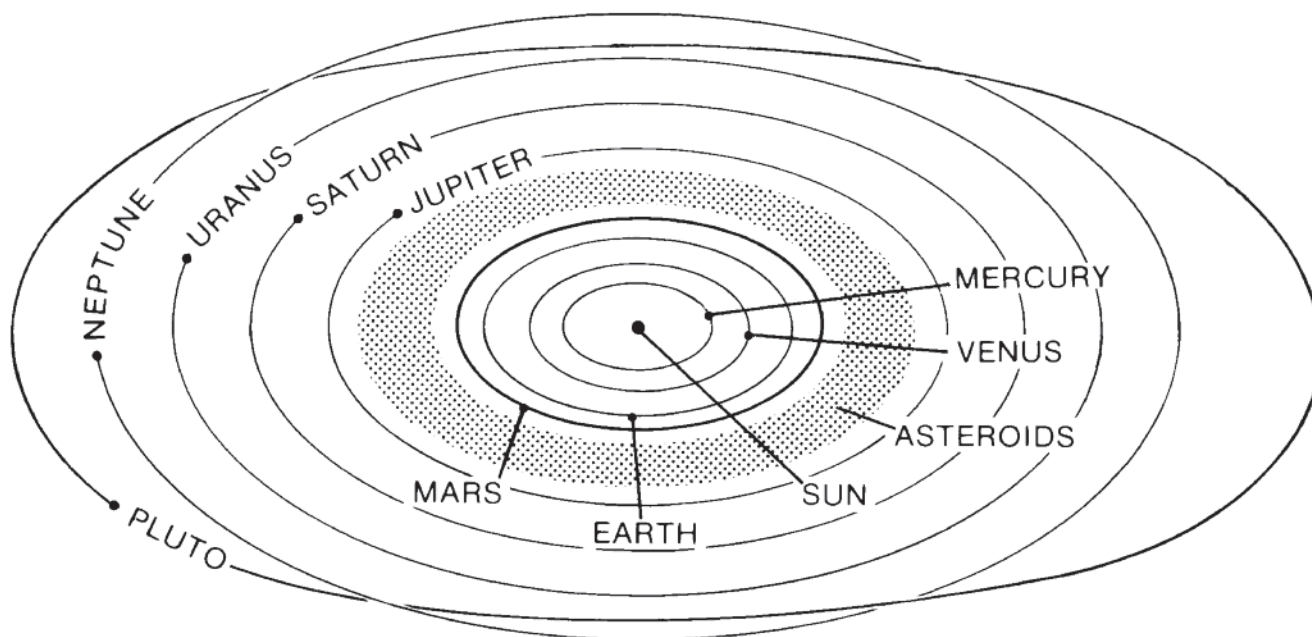


The moon's gravity is only one-sixth as great as Earth's gravity.

fifty pounds here, he could lift three hundred pounds there. Two astronauts made the first landing on the moon in 1969. They brought back samples of soil and rocks for study.

Planets. Do you remember how many planets are revolving around

the sun? Nine planets, including the earth, orbit the sun. You will recall that Mercury is the nearest to the sun. The other planets, in order from the sun, are Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto.



Our Solar System

Stars. The number of stars that we can see on a clear night without a telescope is between three thousand and five thousand. Man has estimated an endless number of galaxies with billions and billions of stars in each galaxy.

Because stars have been studied for centuries by astronomers, some people confuse astronomy and **astrology**. Astronomy is a scientific study of the universe. Astronomy is a true science. Astrology is superstition. Astrologers make a business of trying to tell people's fortunes by studying the planets and stars. The Bible warns against believing in astrology. Scientists know that such dependence on the stars is nonsense. We study astronomy to better

understand the universe, not to learn about ourselves or our future.



Early Telescope



Write true or false.

- 1.1 _____ The earth revolves around the sun causing day and night.
- 1.2 _____ The sun travels at a high speed as the Milky Way spins on its axis.
- 1.3 _____ God created the moon on the seventh day.
- 1.4 _____ Without the sun, life on Earth would be impossible.
- 1.5 _____ Nine planets orbit the sun.
- 1.6 _____ Four planets orbit the earth.
- 1.7 _____ Astrology is a superstition warned against in the Bible.
- 1.8 _____ The earth is the center of the solar system.
- 1.9 _____ Comets are smaller objects in space that orbit the sun.
- 1.10 _____ Asteroids orbit the moon once every twenty-four hours.



On each line write the letter of the correct answer.

- 1.11 Two astronauts landed on the moon in _____.
a. 1969 b. 1909 c. 1979
- 1.12 The planet nearest the sun is the planet _____.
a. Mercury b. Venus c. Earth
- 1.13 The scientific study of the universe is called _____.
a. geology b. astrology c. astronomy
- 1.14 The number of stars that can be seen on a clear night without a telescope is _____.
a. 200 to 500 b. 3,000 to 5,000 c. 5,000,000 to 10,000,000
- 1.15 An instrument used to study the stars is the _____.
a. telescope b. periscope c. barometer
- 1.16 The Bible account of Creation tells us that the sun and moon were created to rule _____.
a. the earth b. day and night c. the people of the earth
- 1.17 Astronomy is a _____.
a. superstition b. science c. false religion



Answer these questions.

- 1.18 What are the three large bodies that are part of the solar system?
a. _____ c. _____
b. _____
- 1.19 What are the smaller objects in the solar system called?
a. _____ c. _____
b. _____
- 1.20 If a boy weighs 60 pounds on earth, how much would he weigh on the moon? _____
-

EARTH

Plants, animals, and man depend on God's wonderful creation and each other for life. In this part of your **LIGHTUNIT**, you will review the structure of plants and how plants function. You will recall that the five important parts of plants are the roots, stems, leaves, flowers, and fruit.

Animals, too, are an important part of God's creation. You will recall how wonderfully animals are made. Animals can travel long distances by walking, running, flying, or swimming. Each animal is suited for living in the community where he has been placed. Animals eat and digest many different types of food. They breathe by means of lungs, gills, and pores. You will also review in this **LIGHTUNIT** something about the actions of mammals, fish, birds, and insects. You will also recall how

animals are provided for and protected by God and man.

Plants. When God created the earth, He created both nonliving and living things. Plants are living things. Like all of God's creation, plants were made by design. They serve many purposes in the world. Individual plants have parts that make up their total structure. Those parts, the roots, stems, leaves, flowers, and fruit, are necessary for the plants to live, grow and reproduce.

You remember that all living things need air, light, water, and food. Before God put plants on the earth, He placed all the necessary things on the earth to help plants grow. He made each part of the plant with something special to do.

The roots of a plant reach into the earth's soil to drink up the water and

take up minerals. The water and minerals move up through the stem to feed the leaves, the buds, and the flowers.

From the air the green leaves take carbon dioxide. Light from the sun shines upon the leaves. The carbon dioxide gas combines with the water in the leaves. By the process of **photosynthesis**, the leaves put all these elements together to make food.

Some plants, such as beets and carrots, store their food in their roots. Other plants store food in their stems (celery) or in their fruit (apple and orange trees). In addition to food,

plants are used for shelter, for fiber, and for enjoyment.

Plants also have another very important use. They take in some of the carbon dioxide that man and animals exhale. The plants then give off oxygen into the air. This process keeps both animals and humans alive. It keeps a balance of fresh air in our natural surroundings.

Leaves drop to the ground and decay or rot. Decaying leaves put minerals back into the soil. The plant, the leaf, the wind, the animals, and decay all work together to keep life going. This process is called the *decay cycle*.



Write true or false.

- 1.21 _____ Plants take only oxygen from the air to make food.
- 1.22 _____ Plants need air, light, water, and food to grow.
- 1.23 _____ The stems and leaves of carrots are store-houses for the food they make.
- 1.24 _____ Plants take up minerals from the soil.
- 1.25 _____ Each part of a plant has something special to do.



Answer these questions.

- 1.26 What are the five important parts of a plant?
- a. _____ d. _____
- b. _____ e. _____
- c. _____
- 1.27 What are two important uses of plants?
- a. _____ b. _____
- _____