



EXPERIENCE
ASTRONOMY

elementary

STUDENT
ADVENTURE GUIDE

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Experience Astronomy Elementary: Student Adventure Guide

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Introduction

Before the scientific revolution, the scientist who had the greatest impact on the study of astronomy was Claudius Ptolemy. You might say he literally “wrote the textbook” on astronomy, and for a millennium and a half, this second century Roman author shaped the study of astronomy in the western world.

Even though he was a pagan man, for him, the study of astronomy was more than just scientific. It captivated him with wonder and set his mind on God. He wrote, “If for a moment I gaze up at the wheeling circle of stars, my feet no longer stand on the Earth. I touch the Creator, and I drink immortality.”

Experience Astronomy Elementary gives students a taste of what Ptolemy and thousands of other astronomers have experienced over the centuries—a taste of the sky.

In addition to the online video course, this companion volume guides students through their own exploration of astronomy. Parents can choose which activities they want to incorporate. After watching each video lesson, parents can...

- Pick out books from the reading lists (either to read aloud or assign as independent reading).
- Assign copywork to practice handwriting skills—and learn interesting quotes about astronomy from the Bible and world history.
- Help their child with hands-on learning activities that will make the lesson come to life!
- Give their kids a short quiz to test what they learned from the lesson.

The lesson cards, used to assist your child in memorizing important astronomy facts, are sold separately or included as a download as part of the course.



Why God Loves Astronomy

God is the creator of the sun, moon, and all the stars in the sky. God gave us the lights in the sky to give us the rhythms of day and night, to help us mark the seasons of the year, and to give us light so we can see.

Recommended Reading

- ★ Genesis 1-2
- ★ *In the Beginning: Creation Stories from Around the World*, by Virginia Hamilton, p. 78-85 and 110-115 (the entire book is fantastic for learning more about creation myths from around the world, but the samples recommended above are strongly recommended)

ACTIVITY Shoe Box Planetarium

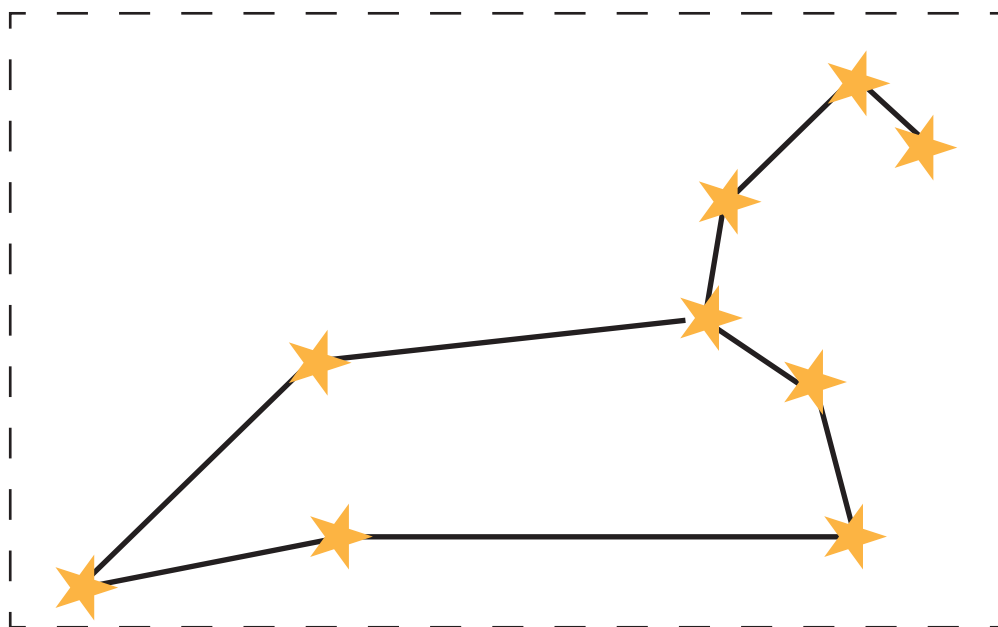
SUPPLY LIST

- Shoe Box
- Scissors
- Dark Paper
- Pen or pencil
- Straight Pin
- Tape
- Flashlight

MORE FUN: Look up more constellations that are visible in your area. Recreate them on a piece of paper the same way you did with Leo so you can project them on your wall!

INSTRUCTIONS

1. On one side of the shoe box, cut a hole just large enough to be able to insert a flashlight into the box.
2. On the other end of the shoe box, cut a 3" x 5" rectangular hole that you'll later be covering with a piece of dark paper.
3. Cut out the star guide of the constellation Leo below.
4. Tape the star guide to a piece of dark construction paper. Use a straight pin to push holes through the construction paper at the locations of each of the stars in the constellation Leo.
5. Cut the piece of construction paper to the right size to cover the rectangular hole in the box and tape in place.
6. Point the shoe box toward a blank wall. In a dark room, turn on the flashlight so you can see your constellation projected on the wall.



Lesson 1: Psalm 8:3-4a



When I look at your heavens, the work of
your fingers, the moon and the stars, which
you have set in place, what is man that
you are mindful of him?

Handwriting practice lines consisting of ten sets of three horizontal lines (top, middle, bottom) for tracing and writing.

Lesson 1: Psalm 8:3-4a



When I look at your heavens,
the work of your fingers, the
moon and the stars, which you
have set in place, what is man
that you are mindful of him?

Three sets of handwriting practice lines. Each set consists of a solid top line, a dashed middle line, and a solid bottom line.

Lesson 1: Psalm 8:3-4a



Handwriting practice lines consisting of ten rows. Each row is defined by three horizontal lines: a solid top line, a dashed middle line, and a solid bottom line.

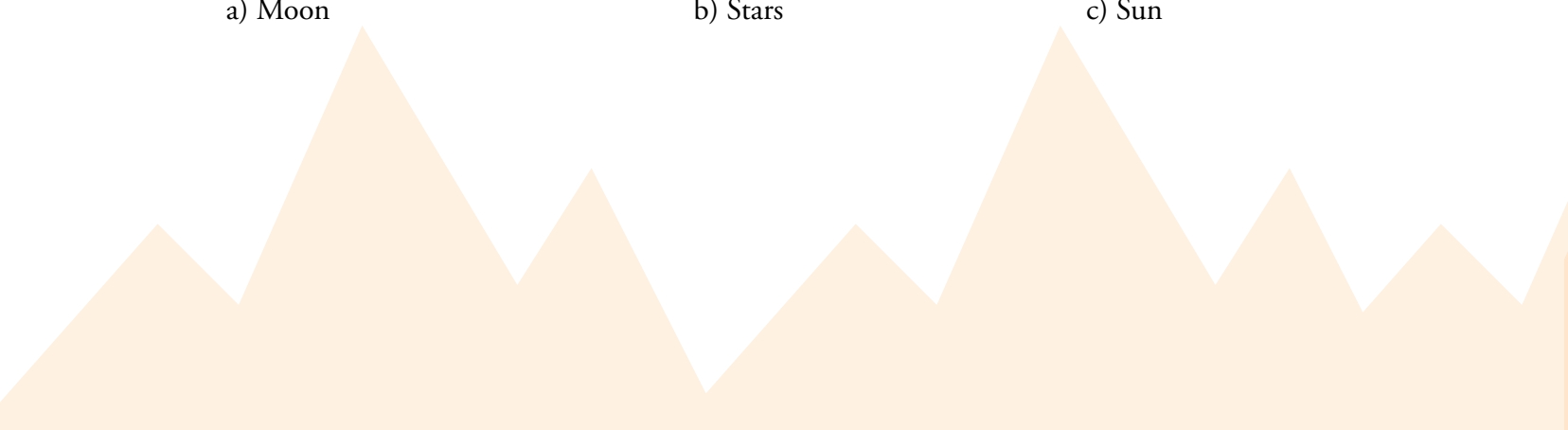


Why God Loves Astronomy



Lesson 1 Quiz

1. What is the scientific study of sun, moon and stars?
a) Astrology b) Astronomy c) Constellations d) Science
2. In Genesis 1:1-2, what did God create? _____
3. What is that one big similarity between the Babylonian creation story and Genesis?
a) War between the gods b) Sea monsters c) Deep waters
4. In what bible verse did God say, 'Let there be light'?
a) Genesis 1:3 b) Psalm 19:1 c) Revelation 21:8
5. Who wrote the story in Genesis? _____
6. Give one reason why God created light. _____
7. Official patterns of stars in the sky are called...
a) Constellations b) Celestial c) Astrology d) Asterisms
8. How many constellations are in the sky?
a) 99 b) 88 c) 77
9. What verses in the Bible talk about the reasons why God created the heavenly lights?
a) Psalm 19:1 b) Genesis 1:14-15 c) Psalm 8:1
10. What do we call the big ball of gas that is 93 million miles away that gives the earth warmth and light?
a) Moon b) Stars c) Sun






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Saturn: Put a Ring On it

Ancient people believed Saturn was the planet furthest away from the Earth as it moved slowly through the sky. But what they couldn't see was all of Saturn's beautiful rings that make it the most recognizable planet in the solar system.

Recommended reading:

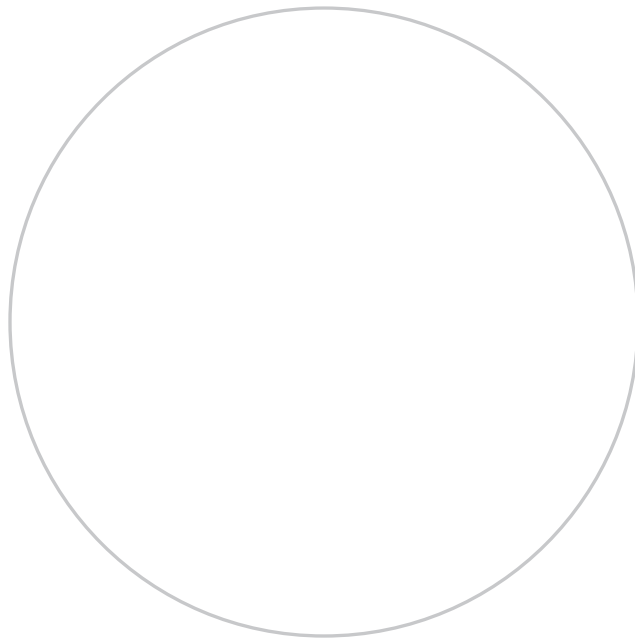
- ★ *Saturn* (True Books: Space), by Elaine Landau
 - ★ *Our Solar System*, by Seymour Simon, p.41-47
 - ★ *Astronomy* (Eyewitness Books), by Kristen Lippincott, p.52-53
- 



FAST FACTS ABOUT SATURN

DRAW A PICTURE OF THE PLANET.

IS THIS PLANET A
TERRESTRIAL PLANET
OR GAS GIANT? (CIRCLE ONE)



DIAMETER _____

NUMBER OF MOONS _____

HOTTEST TEMPERATURE _____

COLDEST TEMPERATURE _____

LENGTH OF DAY _____

LENGTH OF YEAR _____

INTERESTING FACTS _____



ACTIVITY

Build Your Own Saturn

SUPPLY LIST

- An unwanted CD or DVD
- 2-inch diameter styrofoam ball
- Glue
- 2 toothpicks
- Paintbrush
- Two or three different colors of glitter, preferably silver, gold, and yellow
- A sheet or two of newspaper

INSTRUCTIONS

1. Prepare for this project by placing a large sheet of newspaper on your work surface to catch any falling glitter.
2. Carefully cut the styrofoam ball in half using a sharp knife (you may need a parent's help).
3. Center the two halves of the styrofoam ball on the top and bottom of a CD and glue them down.
4. Stick the toothpicks into the bottom and top of the styrofoam ball. Use these as handles to help keep glue off your fingers.
5. Place a small amount of glue on the newspaper. Dip your paintbrush into the glue and paint a small circle on top of the ball. Sprinkle one color of glitter on the glue until the glue is covered.
6. Dip your paintbrush in the glue again and paint a ring of glue on the ball, going around the outside of the glitter circle you just created. Sprinkle another color of glitter on this circle of glue until the glue is covered.
7. Continue making glue circles on both the top and bottom half of the ball, alternating colors as you go.
8. Starting next to the ball, paint a small ring of glue on the CD, sprinkling glitter on the circle.
9. Continue painting glue circles and sprinkling with glue until the whole CD is covered.
10. After the glue has dried, you can use a paperclip and some string to hang the planet from the ceiling or a door frame.

Lesson 24



“There is not perhaps another object in the
heavens that presents us with such a variety
of extraordinary phenomena as the planet
Saturn.”

William Herschel

Lesson 24



“There is not perhaps another
object in the heavens that
presents us with such a
variety of extraordinary
phenomena as the planet
Saturn.”

William Herschel

Lesson 24



Handwriting practice lines consisting of ten sets of three horizontal lines (top solid, middle dashed, bottom solid).



Saturn: Put a Ring On it

Lesson 24 Quiz



1. How far is Saturn from the sun?
a) 888 million miles b) 4 million miles c) 93 million miles
2. How many years does it take for Saturn to travel around the sun once?
a) 365 years b) 27.4 years c) 1 year
3. More than 700 Earths could fit inside Saturn.
True False
4. There are small moons inside the rings of Saturn called...
a) Dwarf Moons b) Shepherd Moons c) Ring Moons
5. Saturn's rings stay in place partly because of the gravity of the moons inside the rings.
True False
6. The bright snowy moon of Saturn is called...
a) Enceladus b) Titan c) Enchilada
7. What is the largest moon of Saturn and one of the largest moons in the Solar System?
a) Io b) Europa c) Titan
8. Titan is the only moon that has a thick atmosphere.
True False

