## Lower Elementary - Level 3



## \#10 - The Lights Are Set in the Heavens Genesis 1:14-19

## PICTURES NEEDED

10-1 Seasons chart
10-2 Moon phases chart
10-3 Stars in space
10-4 The sun
Materials Needed: lamp with bare bulb, orange, walnut or small ball, skewer

## REVIEW (Before Teaching Lesson)

- Journal Review: Ask students to share an important truth that they learned from their journal readings at home that week. Share some of your own insights.
- Previous Lesson Review: (Use the visual from the last lesson to aid in review) What does the Bible say about plants? What do evolutionists believe about plants? What does fruit show about a plant? What is spiritual fruit? What does it show?
- The Big Question Review: What does the fruit of a tree reveal?

Let the students give their answers to the question.

- Bible Verse Review: Matthew 12:33

Fruit shows whether a tree is good or bad
Make a tree good and its fruit will be good, or make a tree bad and its fruit will be bad, for a tree is recognized by its fruit.

## LESSON CONIENT

Note: The Bible verses included in the lesson are from the NIV 1984 edition. The wording of the questions is derived from that version. If another version of the Bible is used, questions may need to be adapted.

When we studied the plants God created we looked at what they needed to grow. On days one through three of creation, God created everything plants need to live and grow. What do plants need to grow? Plants need soil, water, air and light.

What was the source of light at the time God created plants? According to the timeline of creation, at the time God created plants, there was no sun or stars. In order to produce light God may have energized the atoms or matter he created first. However, on day four of creation God made continuous physical sources of light to shine on the earth. Genesis 1:14-19 says:
${ }^{14}$ And God said, "Let there be lights in the expanse of the sky to separate the day from the night, and let them serve as signs to mark seasons and days and years, ${ }^{15}$ and let them be lights in the expanse of the sky to give light on the earth." And it was so, ${ }^{16} \mathrm{God}$ made two great lights--the greater light to govern the day and the lesser light to govern the night. He also made the stars. ${ }^{17}$ God set them in the expanse of the sky to give light on the earth, ${ }^{18}$ to govern the day and the night, and to separate light from darkness. And God saw that it was good. ${ }^{19}$ And there was evening, and there was morning--the fourth day.
(As you teach this part of the lesson, place a lamp with a bare light bulb in the middle of the teaching area to represent the sun and use an orange for the earth and a walnut (or a small ball) for the moon.)

From these verses we see that God had several purposes for the lights he made:

1. First, God made the light to separate day from night. What causes night and day? When the sun shines on part of the earth it is day there and on the other side of the earth that faces away from the sun it is night. (Demonstrate this with an orange. Put a mark on the orange to see where it is in relation to the sun as it turns around.)
2. God made the lights to mark time.

- How long does it take the earth to make a complete rotation on its axis? The time it takes for the earth to make one rotation on its axis makes a day of 24 hours. (Rotate the tennis ball and demonstrate.)
Why is a 24 hour day a good design for life? A 24 hour rotation of the earth keeps one side from facing the sun too long, absorbing too much heat and getting too hot. It also keeps the other side from getting too cold. It addition the 24 hour rotation of light and dark relates to the sleep needs of people and animals.
- How long does it take the earth to orbit (circle) the sun? The time it takes for the earth to make a circle around the sun (orbit) is $3651 / 4$ days or one year. (Walk around lamp with the orange) 365 days or one year divided into twelve months makes up the solar calendar which we follow.
- How does the orbit of the earth around the sun relate to the seasons of the year? The orbit of the earth around the sun creates the seasons that relate to the growing patterns of plants (spring - planting, summer - growth, fall - har vest, winter - rest). (picture 10-1)

Stick a skewer through the orange and hold the orange at the angle of the earth's axis (23.5 degrees). Use the light bulb as the sun and walk in a circle (orbit) around it, always keeping the tilt of the skewer and the orange the same and facing the same direction as you move around the sun. (Fix on a place on the wall to assure that you don't change the orientation of the tilt or the direction you are facing. At some point, you will be walking backwards.) As you walk around the sun have the children explain which pole is closest to the sun, what season it would be in the northern and southern hemispheres and what the temperature would be in each hemisphere and why. Explain that the more sunlight that hits the earth the warmer it gets. The area around the equator (tropics) is hotter because the rays of the sun hit it more directly than they do the northern or southern hemispheres.

- How long does it take the moon to orbit the earth? The length of time it takes for the moon to make a circle (orbit) around the earth is $29 \underline{1} 2 \mathrm{days}$. (Demon strate movement of moon around the earth using the orange and walnut.) (picture 10-2)

What is the difference between a lunar and solar calendar? Some cultures like the Hebrews used a lunar calendar based on the cycle of the moon, rather than a solar calendar based on the seasons and earth's orbit around the sun over a year.
3. God also made the planets and stars. How is the position of the stars in the sky useful to people? Since the beginning of time, people have used the position of the stars in the sky to mark the changing seasons in the year and for navigation. Without the stars, sailors would not have been able to navigate the seas, as they wouldn'† have known where they were and which direction to go.
(Demonstrate how the position of the constellations relative to the earth would change as the earth orbits the sun. Position children at different spots in the room to represent constellations. Mark a position on the ceiling that is always over the North Pole of the earth to mark the North Star. Move the earth round the sun as it would in an orbit.)
4. How does the sun govern the day? When it is day, the sun warms the earth and plants and animals receive life-giving light. The sun governs the day as the power ful light it produces blocks out the light of the stars.
5. How do the moon and the stars govern the night? Although stars shine all the time, the light they produce is only visible at night on the part of the earth facing away from the sun. The moon does not produce its own light; it only reflects the light of the sun. The night is dark enough to allow for sleep but gives enough light to provide direction.
(picture 10-3) What should we think about when we look at the stars at night? We should think about the one who made them all. We should contemplate his great majesty and power.

Isaiah $40: 26$ says Lift your eyes and look to the heavens: Who created all these? He who brings out the starry host one by one, and calls them each by name. Because of his great power and mighty strength, not one of them is missing.

What does Isaiah say that God knows about the stars? Isaiah says that God calls each one of the stars by name.

What does that mean? That he knows everything about each one and they all belong to him. God knows and understands everything about his creation.

Does anyone have any idea how many stars there are? There are about 3,000 stars that can be seen at night with the naked eye, but there are estimated to be seventy sextillion 70 followed by 21 zeros (70,000,000,000,000,000,000,000) of them in the visible universe (outer space that can be seen through a high power telescope). That means that there are more stars in the sky than there are grains of sand on all the beaches of the entire earth.

What do the stars teach us about God? Let the children give their answers.
God is the creator of everything in the heavens and is intimately involved in its functioning. He knows all there is to know about the universe. Just as he knows the stars by name, he also knows each one of us. The Bible says he knows the number of hairs on each one of our heads. God is the creator and worthy of all our praise. We need to submit our lives to him,

## LESSON WRAP-UP

- Overview Questions: For what purposes did God make the lights in the sky? How long is a day? Why is 24 hours a good length of time for a day? How long is a year? Why is 365 days a good length of time for a year? How many stars are there? What does God know about each star?
- Thought Questions: What does the sun do for the earth? What would have happened to the earth if God had not created the sun? What does the moon do for the earth? What would have happened to the earth if God had not created the moon? How do the heavens speak of God?
- Prayer: Thank God for the wisdom of his design, that he set the lights in the heavens to give light and mark time. Pray that as you look to the heavens you will see more clearly his greatness and awesome power and would worship him as he deserves.
- The Big Question: What do the stars tell us about God?

Let the students give their answers to the question. Share the memory verse. Ask how it answers the question.

- Memory Verse: Isaiah 40:26 There is nothing God doesn't know or can't do.

Lift your eyes and look to the heavens: Who created all these? He who brings out the starry host one by one, and calls them each by name. Because of his great power and mighty strength, not one of them is missing.

Questions: Who created the stars, moon and sun? What does God know about each of the stars? What does that mean?

## ACTIVITIES (Completed afier the lesson)

Any age appropriate activity can be included which fits into the class time. The activities with a star are included on the class notes.

Lesson Notes: Have the children answer the two questions individually or as a group. What did you learn from this lesson? How can you put into practice what you learned?

Memory Verse: Read the memory verse on the cover of the class notes and then have the students fill in the blanks in the verse.

Activity Page: Practice drawing stars.
This Week's Big Question: Have the students fill in the blanks for the way the memory verse answers the big question.

There is nothing God doesn't know or can't do.
Coloring Page: Color the lesson picture.

- Craft: Cutting Five-Pointed Stars

As a reminder that God created everything in the heavens, learn how to cut a fivepointed star as Betsy Ross did when she made the American flag.
Materials: white copy paper
Preparation: none
Instructions: Included in craft 10.

- Game - Sun, Sun, Moon (Duck, Duck, Goose)

As a reminder that God created everything in the heavens, play "Duck, Duck, Goose" but use the words "Sun, Sun, Moon" instead.

- Investigation Activity - The Phases of the Moon

Use the visual (picture 10-2) to explain the phases of the moon and then demonstrate the phases to the children, using the light bulb as the sun and the orange and walnut as the earth and moon. Position the walnut at different points on its orbit around the earth and have the children explain what phase the moon is in, what they can see of the moon at that phase and why.

## JOURNAL

The journal is passed out at the end of class for the students to complete at home. It has six poetic readings and related Bible verses. It would be beneficial for the teacher to read through and be familiar with its content.

