

Sun, Moon, and Stars

<i>Text</i>	Genesis 1:14-19
<i>Readings</i>	Psalm 19:1-6, Psalm 8, Romans 1:18-25
<i>Theme</i>	God created the sun, moon and stars to give light on the earth and to mark time and seasons
<i>Purpose</i>	To emphasise the greatness of God in creating a vast universe and his love in placing us in this unique earth

All through history people have been fascinated by the stars.

The Babylonians in the ancient world were master astronomers and had an advanced knowledge of the patterns and movement of the stars.

Those ancient peoples named many of the star constellations. They related these to their gods and believed that the movements of the stars had an effect on their lives on earth. Often they were terrified by what they saw as “signs in the sky” (Jeremiah 10:2).

Job knew better; he knew that God created these star systems; “He is the Maker of the Bear and Orion, the Pleiades and the constellations of the south.” (Job 9:9).

The Phoenicians were well known for their ability and skill as sailors and they relied on the stars and planets for navigation.

That ancient world knew about five planets: Mercury, Venus, Mars, Jupiter and Saturn.

In the early 17th century Galileo invented the telescope which opened up the mysteries of the universe even more. In 18th century astronomers discovered Uranus (1781), in the 19th they found Neptune (1846) and in the 20th they found Pluto (1930). And since the launch of the Hubble telescope we have had a vast amount of information and pictures come to us about the universe.

The interest of many is not merely scientific.

A lot of people are interested because they believe the stars will inform them of the future. So they read their horoscopes to find out what their star sign has to tell them about what will happen tomorrow or this week.

And then there are others who are fascinated by the universe because they are looking for other forms of life. Think of the interest in aliens and UFOs as well as the science fiction books and movies - ET, the Star Wars series, Star Trek.

As Christians, however, we are not interested in the stars and planets for their own sake, nor for any information about the future.

Rather, our interest is in the God who made all this - in the Creator of the universe.

Today we are going to have a close look at the creation of the sun and moon and stars, but we want to do that so that we have a better understanding of God in his greatness and love.

God Created the Sun and Moon

We know that God created light on the first day of creation. "Let there be light", he said, "and there was light." That means that God initially made light without the sun as a light source because it wasn't made until the fourth day of creation.

The sun and moon are called "two great lights" (vs 16) - a greater light and a lesser light. Moses wrote this in everyday language that people of all ages and places could understand. It was not written in scientific or technical terms.

These heavenly bodies were created for specific **purposes**. Four are mentioned.

They were created "to give light on the earth" (vs 17). Life is impossible without light. We need light to be able to live and work. We need the heat and light of the sun to stay healthy and well.

God also made the sun and moon "to govern the day and the night". The sun was in charge of the day and the moon in charge of the night, so to speak.

And they were made to "separate light from darkness". The 24 hour rotation of the earth gives us a day and a night - 12 hours of each if you live near the equator - so we have time to work and time to sleep. There is a regular pattern to our lives built in to the created world by God himself.

The fourth purpose is mentioned in verse 14: they are to "serve as signs to mark seasons and days and years". We could call them the "timekeepers" of our world.

The rotation of the earth on its axis marks 24 hours.

The cycles of the moon mark the lunar months.

The orbit of the earth around the sun marks 365 (and a quarter) days - one year.

They are signs marking the regular passage of time. They were made for a purpose.

The sun was made specifically for our earth.

Astronomers call our sun a yellow dwarf. It is a very large star compared to the others in our galaxy and is in the top ten per cent in size, although there are other stars that are much larger

still. 80% of the stars of our galaxy are called red dwarfs and they do not produce the conditions that are necessary for life as we know it.

Our sun is very stable compared to other stars and has a very consistent output of light which prevents wild swings of climate on earth.

And it produces the right colours - a balance of red and blue - which gives us enough ultraviolet light which builds up oxygen in the atmosphere.

God has also placed the earth exactly the right distance from the sun to give us the right temperature to sustain life.

Mercury and Venus are too close to the sun and so are far too hot to sustain life. If we were closer to the sun the oceans would boil and evaporate.

Mars and the other planets further out are far too cold, and if we were further away all the water on our planet would freeze.

The earth also has exactly the right rotation in relation to the sun. If we rotated more slowly the sunlight hours would be much longer and the plants would burn, while on the other side the nights would be so long that everything would freeze.

God also made the **moon to help us.**

The moon gives us light on earth during the night by reflecting the light of the sun. If the moon is not up or if it has waned to a small crescent then the nights are very dark.

The moon also stabilises the angle of the earth. The earth is tilted on an angle away from the sun at 23 and a half degrees off vertical. The moon helps hold the earth at this angle so that the tilt only varies by about one and a half degrees. If the moon wasn't there the earth would swing wildly over a large range and this would cause dramatic changes in temperature.

This tilting, plus our orbit around the sun gives us our seasons of winter, spring, summer and autumn. This provides variety on the earth and also gives the soil time to lie idle and to soak up moisture and restore its fertility.

The moon is also increases the tides on earth. It contributes 60% to the tides; the sun does the other 40%.

Tides are important because they flush nutrients from the land into the sea and this keeps the oceans rich in nutrients.

They also flush away all the pollution that gathers around the shoreline of heavily populated areas.

And the tides help circulate water around the oceans which transfers heat around the earth and helps keep us in New Zealand a bit warmer than we otherwise might be!

All these facts about the sun and the moon show us that God planned all this for us to live on this earth with just the right placement in our solar system.

“He Also Made the Stars”

You might almost miss this little statement at the end of verse 16. It’s almost a “by the way”, an afterthought; “Oh yes, he also made the stars”. One writer describes this as “that greatest of all understatements.”

You will remember the Genesis story where God repeated his promise to Abraham that he would have many descendants. He took him outside on clear Eastern night. There were no city lights to dim the stars. God said; “Look up at the heavens and count the stars - if indeed you can count them.” (Genesis 15:5).

On a clear cloudless night, with just your eyes, you can see three to six thousand stars. With the aid of a small telescope you can see about 100,000 stars. With larger telescopes you can see even more. So many they are beyond counting. There are trillions of stars! And many of the fuzzy spots of light you see are not stars but massive groupings of stars gathered in galaxies.

Let’s think about **our own galaxy**.

We live in a galaxy known as the Milky Way. It contain billions of stars. In the universe distances are measured in light years, which is the distance light travels in one year, travelling at 300,000 KMs per second!

Our galaxy is shaped like a gigantic discus and is 10,000 light years deep and 100,000 light years across. It is known as a spiral galaxy because of the big bulge in the middle and the huge spiral arms that go out from that each side. This type of galaxy offers the best place for life because it provides safe zones.

Our solar system is located in one of these safe zones. We are well away (30,000 light years) from the nucleus or centre of the galaxy, which is a dangerous place to be because there is a massive black hole there with strong tidal forces and high energy and radiation levels. Anything that gets near that black hole gets torn up.

We are also away from the spiral arms where there is active star formation and dangerous giant molecular clouds.

God has placed our solar system in a safe galaxy, and in a safe and stable part of it, between two spiral arms (Sagittarius and Perseus). He has put us in a place where life is possible.

What's more, God has organised our solar system to keep the earth safe. We have already seen that he gave us the right sort of sun and placed us at the right distance from it.

He also put Jupiter out there which acts as a shield to protect us from comets coming into our solar system. Jupiter is a huge planet, 300 times the mass of the earth, and it deflects many comets and prevents them from coming into the inner part of our solar system.

One more point of interest is that our position in our solar system and in our galaxy puts us in a wonderful position to see the sun and other stars and other galaxies. God has given us an ideal position for scientific exploration and discovery. He also gave us a transparent atmosphere so we can see through it out into the vast world around us. The universe was designed for discovery and God has given us access to it. He allows us to explore it and he wants us to, so that we can marvel at all his works.

God made many other galaxies.

Astronomers have no idea how many other galaxies there are. Our closest neighbour galaxy is Andromeda which is 2 million light years away and twice the size of ours. Some have suggested there may be 100 billion galaxies in the universe. Galaxies in the universe are as common as trees in a forest! This is beyond our comprehension - we can't understand it - it is too much to take in!

Much more could be said about the earth and its relation to the sun and moon and much more could be said about the stars. But we have said enough to make **Two Applications** out of all this.

The first is that we should **praise God for his greatness.**

The vast size of the universe is a testimony to the greatness of God. Psalm 19 reminds us that "The heavens declare the glory of God and the skies proclaim the works of his hands. Day to day pours forth speech and night after night declares knowledge."

God created everything on the earth and in the universe. He guides the orbits of the planets and of the moons and the courses of the comets. He made all these trillions of stars and billions of galaxies. Psalm 147 tells us; "He determines the number of the stars and calls them each by name. Great is our Lord and mighty in power, his understanding has no limit." (vs 4-5).

Jeremiah tells us: "God made the earth by his power; he founded the world by his wisdom and stretched out the heavens by his understanding." (Jeremiah 10:12)

The Scriptures call us to respond to God in praise for his greatness.

Sadly, many people worship what God has made rather than the One who made it; they have exchanged the truth of God for a lie, and worship and serve created things rather than the Creator (Romans 1:25).

The pagan nations of the Ancient Near East worshipped the sun and the moon. This is why Moses specifically warned Israel not to bow down and worship the sun, moon or stars (Deuteronomy 4:19).

And Isaiah directed their attention to the Lord when he wrote; “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.” (Isaiah 40:26).

Psalm 148 calls on all of creation to glorify God. (Psalm 148:1-6)

Are you praising God for what he has made? Are you glorifying him for such a marvellous creation and for all his great power?

The second application is that we should **praise God for his love.**

Everything we have considered shows that God made the earth for us. Our planet is not the centre of the solar system, nor of the universe, as the ancients thought. But it is the centre of God’s activity. God made the universe for his glory and for us.

Some people hold to the “many universe theory” - that there are many possible worlds where life exists and many possible civilisations like ours. But the evidence of astronomy points to the uniqueness of this earth. Conditions on this planet are delicately balanced to provide the right environment for life. We are in the right galaxy and in the right place in it and we have the right sun and we are in a perfect position in relation to it, and so on! God did this for us so that we could live in this beautiful world.

Listen to David’s response to this:

“When I consider your heavens,
the work of your fingers,
the moon and stars that you have set in place,
what is man that you are mindful of him?
The son of man that you care for him?”

We can only be amazed at the place God has given to us and praise him for it - “O Lord our Lord, how majestic is your name in all the earth!” (Psalm 8).

That psalm is also pointing ahead to the Lord Jesus. He is “the son of man”. He is the second Adam. He came into this world. Malachi prophesied that he would be the “Sun of Righteousness” (Malachi 4:2).

When he came Jesus declared; “I am the light of the world.” He came so that we might have the light of life (John 8:12).

This is a further testimony to our unique place in the universe. The Son of God took on our human nature. He was born into this world, on this earth. He lived, died, rose and ascended into heaven. He is in heaven today as God and as a man. He will come back to this earth again one day, to renew all things and bring about a new heaven and a new earth where everything will be perfect once again.

This earth and its people, in all this vast universe, are the focus of God’s attention.

God is great and he has made a vast universe.

God is love and he has placed us in a beautiful world.

What else can we do but honour, praise and worship him!?

Amen