

Is There a Time Discrepancy with the Creation?

“In the beginning God created the heaven and the earth”¹

Introduction

It is commonly accepted by nearly all scientists that the universe is 13.8 billion years old and our earth is 4.5 billion years old.² When we or our children hear these numbers, does it create a conflict in our minds? Do these numbers challenge our faith, or the faith of our children? Can the universe and the earth really be that old? The biblical account of the creation in Genesis tells us the creation took place in six days. Based on that, how do we resolve this time discrepancy and protect our faith and the faith of our children?

One way to resolve this conflict is to realize the description of the creation, as given in Genesis, does **not** require nor demand that one day of creation be 24 hours long. This may take a few readers by surprise. But nevertheless, it's true. And to a religious person, the establishment of this truth about the duration of the creation is of vital importance. Because with this truth, any concern we might have about a perceived time discrepancy between science and religion will automatically disappear.

If the length of a day is not specified, then the six days of creation does not dictate that the earth can only be 6,000 years old (4,000 years from Adam to Christ and 2,000 years since), but can, in fact be as old as scientists say it is. Once we understand that one creation day does not have to be 24 hours long, time discrepancy is no longer an issue! Then, our faith simply won't be challenged by the things we read, hear, or see regarding the age of the earth or the universe. Then, when we read a sign in a national park telling us how old a certain formation is, or read a book indicating how old the earth is, we can smile and tell ourselves, “Yes, that age may be correct, but God is responsible for the creation, and that's the most important thing!”

What is Scripture?

In order to establish that a creation day is not constrained to being 24 hours long, let's start at the beginning. Genesis, the first book in the Old Testament, was written by the Prophet Moses. He lived around 1,500 years B.C., approximately 2,500 years after Adam and Eve. Both science and religion agree that man was not around during the creation—nor until sometime later. This brings the question: “Since the creation was before Moses, how did Moses get the information about the creation?” The obvious answer is that God revealed it to Moses. God told Moses what to write and Moses wrote it. When a

¹ Old Testament; Genesis 1:1

² https://science.nasa.gov/science-news/science-at-nasa/2013/21mar_cmb extracted 25 July 2017

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Prophet writes what God tells him, it becomes scripture. As Apostle Paul stated, “All scripture is given by inspiration of God, and is profitable for doctrine ... for instruction in righteousness.”³

It is interesting to note that the first thing Moses wrote is, “In the beginning God created the heaven and the earth.”⁴ In this statement, Moses declares that God was the creator. Since God told Moses what to write, we must conclude that what is written about the creation is what God wants us to know. This conclusion is backed up by a Modern Day Scripture, “And now, Moses, my son, I will speak unto thee concerning this earth upon which thou standest; and thou shalt write the things which I shall speak.”⁵

Another thing we need to remember about scripture is that it must stand the test of time. The wording of the scripture must be clear and understandable not only for the people at the time the scripture was given, but also for future generations. The scriptures will not be rewritten as man obtains more knowledge; therefore, scriptures must stand the test of time. Wording of scriptures then becomes a very difficult task, especially when we talk about the creation.

As we think about the people at the time of Moses, a valid question is “how could God describe what he had created so they would understand?” Could he use words like “galaxies,” “solar systems,” “orbits,”—or even terms like “gravity”—and have it understood by the people who lived at the time of Moses? Would those words have any meaning to them? For example, the word “gravity” was not even used until the 1600s—it was introduced as a result of the work of Sir Isaac Newton. The concepts of a solar system, galaxies, and a universe were first introduced to the scientific community by Copernicus (1473-1543), Galileo (1564-1642), and Newton (1643-1727). Sometimes we forget how much information we have which was not available to earlier generations.

So back to the original question, “How could God describe what he had created?” God would have to use words and phrases that had meaning to the people back in the time of Moses as well as people that lived after Moses—including our day and beyond. The words that God chose to tell Moses is what we have today. It is interesting to note that even though people back in the time of Moses did not have the scientific knowledge that is available to us today, the terms God used to describe the creation were very understandable to people in that era.

Of course, they knew what daylight and darkness were. They also understood what seasons were and they understood the concept of a year. With that understanding, God proclaimed to them and us: He (God) created everything that we can see—men and women, all the varieties of vegetation, all the varieties of fish, all the varieties of birds, all the varieties of animals— along with all of the stars and planets, the sun, and the moon. His description of the creation was adequate for the people back at the time of Moses, and it still fills our needs today. For the more-curious minded, we would like more, but we have what we have.

Time for the Creation

With this background, we are now ready to discuss whether Genesis defines the length of the creation. The word “day” is used in Genesis to describe the different creation events. In today’s vocabulary, the word “day” is used to describe a precise amount of time (24 hours), but it is also used to

³ New Testament; 2 Timothy 3:16

⁴ Old Testament; Genesis 1:1

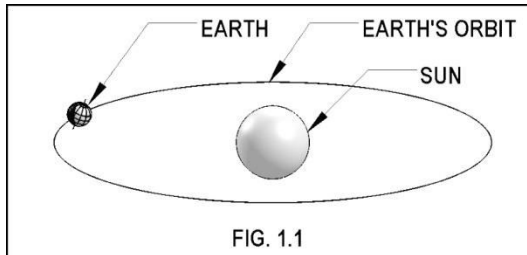
⁵ Pearl of Great Price, Moses 1:40

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describe a period of time or an event that does not have a precise time associated with it. For example, we use phrases such as, “we look forward to the day when cancer will be eradicated,” or “in the day of the dinosaurs,” or “we studied the tactics used in Napoleon’s day,” or “Frank Lloyd Wright was one of the leading architects of his day.” Our challenge, then, is to determine how the word “day” is used in the scriptures and what meaning it has with respect to the creation.

To help in our determination, let’s discuss the solar system. The precise times for a “day” and “year” are controlled by our solar system. As pointed out earlier, God did not specifically talk about the solar system. However, by examining the creation events that God described, we can determine the solar system was created during the fourth day or fourth period of creation.

The scripture describing the creation of the solar system reads, “And God said, Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for signs, and for seasons, and for days, and years: And let them be for lights in the firmament of the heaven to give light upon the earth: and it was so. And God made two great lights; the greater light to rule the day, and the lesser light to rule the night: he made the stars also. And God set them in the firmament of the heaven to give light upon the earth, And to rule over the day and over the night, and to divide the light from the darkness: and God saw that it was good. And the evening and the morning were the fourth day.”⁶



This scripture tells us that the two great lights (the sun and the moon) were created during the fourth day of creation and placed in the heavens—therefore, the sun and the moon were not in existence for the first day or first period of creation, nor were they in existence for the second day or second period of creation, nor were they in existence for the third day or third period of creation. According to this scripture, the earth could not have received light from our sun or moon during the first three days of creation because the sun and moon had not yet been created.

If the earth received light during the first three periods of creation, the light could not have come from our sun or moon. Furthermore, during these three days of creation, we don’t know if there was a sunrise or sunset from another light source or if there were any means to separate one day from another—or even if the earth was rotating. If the earth was rotating, we do not know the rate of rotation which would dictate the length of the day. So, how long were the first three days of creation? It is anyone’s guess.

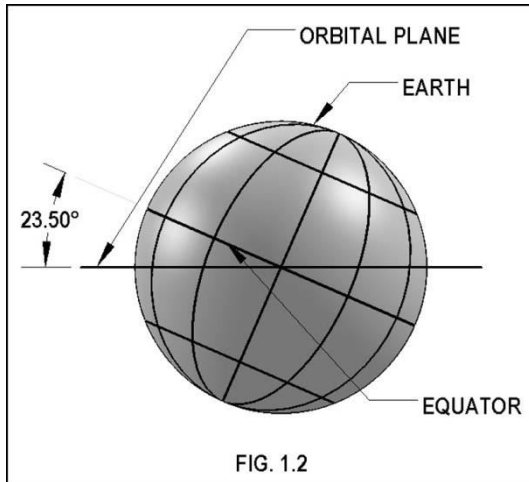
According to the description God gave Moses for the fourth day or fourth period of creation, the following events took place:

- The creation of the Sun and the Moon to provide light upon the earth
- The creation of our year
- The creation of our seasons
- The creation of our day

Our solar system was created when God set the sun in space and placed all of the various planets in orbit around our sun. At this time, God placed our earth in orbit around our sun, as well. When God placed our earth in orbit, as shown in Fig. 1.1, the length of our year was established. Before this

⁶ Old Testament; Genesis 1:14-19

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happened, the definition of our “earth year” was meaningless. A year is defined as the time it takes the earth to make one complete revolution around the sun—365.25 days. Hence, our year is approximately 365 days long and we have a leap year every 4 years to keep everything in balance.

The seasons were created by God in a very clever manner. He merely tilted the earth with respect to the earth’s orbital plane. This can be observed by looking at Fig. 1.2. The amount of tilt is 23.5 degrees. A line from the South Pole to the North Pole represents the axis of rotation for the earth.

Figure 1.3 shows the effect of tilting the earth with respect to its orbital plane. The relative positions of the earth are shown for the different seasons in the northern hemisphere. Notice that the tilt of the earth with respect to the orbital plane remains constant throughout its orbit.

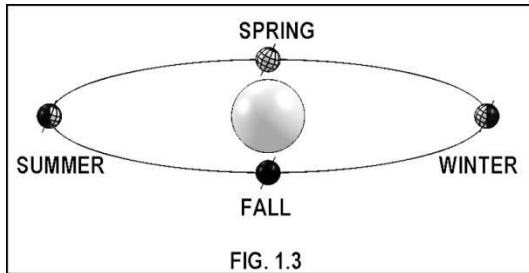
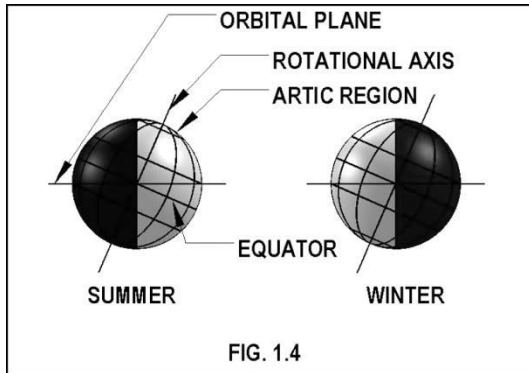


Figure 1.4 is a close up of the earth at the start of the summer and winter seasons in the northern hemisphere. In this figure, the sun would be positioned between the summer and winter images, but for both clarity and scale, the sun is not shown. The lighter portions of the figure represent light from the sun (daylight) and the darker areas represent areas being shielded from the sun (nighttime).

As we observe the summer image, all of the Arctic Region or the Northern Polar Cap is covered with sunlight. This would be the first day of summer in the northern hemisphere, and the first day of winter in the southern hemisphere. As we look at the winter image, the Antarctic Region or the Southern Polar Cap is covered with sunlight. This would be the first day of summer in the southern hemisphere, and the first day of winter in the northern hemisphere. Before the creation of the solar system or the fourth period of creation, the earth did not have any seasons.



As can be seen from Fig. 1.1 and Fig 1.3, the sun provides light to the earth continuously as the earth orbits the sun. In order to divide the day from the night or to divide the light from the darkness, God started the earth to rotate on its own axis. The earth’s axis of rotation is a line that runs from the South Pole to the North Pole as shown in Figure 1.4.

When God started the earth to rotate about its axis, our “day” was created. As the earth rotates, we have a sunrise, followed by daylight, followed by a sunset, followed by darkness or night. The rotation of the earth divides the light from the darkness. The rotational speed of the earth also defines the length of our day. One complete rotation of the earth is defined as one day. Before the earth started to rotate in

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our solar system, the definition of an “earth day” was meaningless—there was no such thing as a 24-hour day as we now know it.

When God placed the moon into an orbit around the earth, a way was provided for light from the sun to reflect off of the moon’s surface—thus providing light to the earth during the night. With the sun in the center of the solar system and the moon orbiting the earth, the greater light (sun) could rule over the day and the lesser light (moon) could rule over the night. The solar system—comprising of the sun, the moon, the earth’s orbit, the tilt of the earth with respect to the orbital plane, and the earth’s rotation about its axis—fulfilled the portion of the scripture that reads, “*And God said, Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for ... seasons, and for days, and year.*”⁷

In conclusion, our day with a time equal to 24 hours was not created until the fourth day or fourth period of creation—when our solar system was created. When our 24-hour day was created, the first day of creation, the second day of creation, and the third day of creation were already complete. Therefore, we do not know how long these days were; the length of these days cannot be determined. Furthermore, since the same definition for a day is used to describe subsequent creation periods, we don’t know how long those creation periods were either. Therefore, we do not know if the time for all of the creation periods were the same length. I would assume that the creation periods were of different lengths since some of the creation periods are more complex than others. We must conclude that when the word “day” is used in the description of the creation, it is referring to a period of creation and not to a 24-hour day.

Further Insight to the Word “Day”

Let’s return to our discussion for the first day of creation. Moses said, “... *And God called the light Day, and the darkness he called Night. And the evening and the morning were the first day.*”⁸ In this scripture, Moses used for the first time the following words: light, darkness, day, night, evening, and morning. He then used these first-time-used words to define a day. In this passage of scripture, the word “day” has two meanings. The first definition is “*God called the light Day*”; or “day” is defined as when we experience daylight.

The second definition for “day” is given by the phrase, “*And the evening and the morning were the first day.*” This phrase is used at the end of each creation period—continuing from the “first day” through the “sixth day.” Further examination of the second definition helps us conclude that “day” is not meant to describe a period of 24 hours but a period or an event of unknown length.

Let’s examine the phrase, “*And the evening and the morning were the first day*” and ask ourselves, “*Does that description define a 24-hour period?*” One interpretation of the scripture could be “from evening until morning” which would just describe the “nighttime.” Another interpretation could be “from evening through the night and including the morning,” but that still leaves out the afternoon—so that does not describe a 24-hour period either. It would appear that if God wanted to describe a 24-hour period, He would have chosen a different combination of these “first-time-used” words, such as “from morning until the following morning was the first day,” etc. However, the Lord chose not to describe a day in that manner. We must conclude from this, that “day” is not meant to describe a 24-hour period, but it meant to describe an event or period of unknown length.

⁷ Old Testament; Genesis 1: 14

⁸ Old Testament; Genesis 1: 2-5

The Sabbath

Some of the readers may be wondering why we are going to discuss the Sabbath, the “seventh day”. An explanation is in order. Moses wrote the first five books of the Old Testament, namely: Genesis, Exodus, Leviticus, Numbers, and Deuteronomy. In the Book of Exodus, The Ten Commandments were introduced, and these commandments give reference to the creation taking place in six days; therefore, some discussion is warranted.

One might ponder how often we should have a Sabbath. If we were given the assignment to decide how often we should have a Sabbath, how would we go about deciding? Since God does not want us to work on the Sabbath, we must conclude that every day could not be a Sabbath. We would probably determine that having a Sabbath monthly or yearly would be too long between Sabbaths. So how often should we celebrate the Sabbath? God in his infinite wisdom and desire to help people achieve happiness and joy, thought it wise and mandatory that we observe a Sabbath on a weekly basis—or every seven days.

It should be pointed out there is no physical event in the design of the solar system to define the length of a week. The earth’s rotation time around the sun determines the year, and the day is related to the rotational speed of the earth about its own axis. But there is nothing in the solar system that dictates how long a week should be. The definition of a week became the time between Sabbaths—not related to the solar system at all. The Sabbath is a spiritual event—not a physical event. God decided that a Sabbath should occur every seven days. The Lord wanted us to work six days and then have a Sabbath day to remember him—he who has provided us everything: the earth, the air we breathe, our food, our warmth, our life. We must conclude, then, that God created or defined our week by defining how often we should have a Sabbath day.

When Moses published the Ten Commandments, the following is recorded: “Remember the sabbath day, to keep it holy. Six days shalt thou labour, and do all thy work: But the seventh day is the sabbath of the Lord thy God: in it thou shalt not do any work ... For in six days the Lord made heaven and earth, the sea, and all that in them is, and rested the seventh day: wherefore the Lord blessed the Sabbath day, and hallowed it.”⁹

This scripture may give some insight as to why the Lord defined each creation period as a “day.” A metaphor is a word or phrase for one thing used to refer to another thing to show or suggest they are similar. As pointed out earlier, the length of a creation “day” is undefined; nevertheless, God used the word “day” to describe a particular creation event. This allowed God to metaphorically equate six days of creation followed with a day of rest for God—with six days of labor for humankind followed by a day of rest. The Sabbath was symbolic of the mighty works of God (the creation) for which we should be grateful. The mighty creation events show the power and omnipotence of God—something that deserves respect and reverence. The majesty of the creation was the creation itself—not the time it took God to accomplish it. The metaphorical use of the word “day” allows for both the magnificence of the creation, and a definition of how often we should observe the Sabbath.

This question might be asked, “If each period of creation took 1,000 years, would God have directed his people to only observe the Sabbath every 7,000 years?” The answer is obvious. The conclusion from this discussion on the Sabbath is that God wants the Sabbath observed every

⁹ Old Testament; Exodus 20: 8-11

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week—every seven days—and that God defined each period of creation as a day. This definition allowed God to metaphorically link the creation with the Sabbath day observance.

Questions to Ponder

Question 1: Scientists estimate that the universe is 13.8 billion years old. Scientists also believe that the earth is 4.5 billion years old. Does God’s use of the word “day” in Genesis allow for this time table? Answer: Yes!

As pointed out in our discussion, we simply don’t know how long each creation period was and we don’t know if they were all the same length. It is very hard to dispute the scientific dating methods that have been developed. The results seem to be very consistent. There have been examples where some dates have been wrong, but by only a small percentage—not by orders of magnitude. We also have fossil records, dating millions of years old. With as many fossils that have been found, it doesn’t make sense that all of the dating could be wrong.

There is also some scriptural evidence that the creation took longer than six, 24-hour days. In Modern Day Scripture, Abraham also gives us an account of the creation. Abraham, in describing the third period of creation, wrote, “And the Gods said: Let us prepare the earth to bring forth grass ... and it was so, even as they ordered. And the Gods organized the earth to bring forth grass from its own seed ... and the Gods saw that they were obeyed.”¹⁰

Notice the words “*prepare the earth*,” “*organized the earth*,” and “*saw that they were obeyed*.” The wording makes one wonder what was involved in preparing the earth. Does this mean soil had to be created from the rocky crust? What does “*organized the earth*” imply? Does it mean weather had to be created and some method generated to provide water for the plants? And finally, what does “*saw that they were obeyed*” mean? Does it imply that there could have been some testing to make sure everything would work? If yes, one would wonder how much time was added to that creation period to accomplish these tasks.

In the description of each creation period, Abraham uses similar wording to indicate there was preparation required, other events happened during the preparation, and testing was performed to verify the goals of the creation event were accomplished. This is the same process engineers and scientists use today in designing and developing a product. It makes sense that God would have done it in a similar way.

Question 2: Some theologians suggest that God created the heaven and the earth in six, 24-hour periods. They come to this conclusion by taking the word “day” as a literal definition of a 24-hour period. They also take the word “day” as used in the description of the Sabbath day observance literally. Does the wording in Genesis allow for this time table? Answer: Yes!

As human beings, we do not have any idea of the creation abilities of God, nor do we understand how quickly he can create something. We have much scriptural evidence that his miracles happened almost instantaneously. People were brought back to life—with what was described by the people writing the scripture as almost effortlessly and immediately by the Savior. We have scriptural evidence of people regaining their eyesight, regaining the hearing, and having limbs being restored to their proper function—all of which seemed instantaneously. All of the elements seem to obey his voice.

¹⁰ Pearl of Great Price, Abraham 4: 11-12

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There are scriptural evidences that some of the creation events were almost instantaneous, while other creation events may not have been. From the writings of Moses in Modern Day Scripture, Moses implies that the first, second, and third periods of creation happened while God was speaking. For example, in describing the creation of the firmament, Moses quotes the Lord, “And again, I, God, said: Let there be a firmament in the midst of the water, and it was so, even as I spake.”¹¹ This wording seems to indicate that the firmament appeared instantaneously, “*even as I spake.*”

In describing other creation events, the wording used does not indicate that the creation happened instantaneously. For example, in describing the creation of the solar system, Genesis records, “... And God said, Let there be lights in the firmament of heaven to divide the day from the night; and let them be for signs, and for seasons, and for days, and years: And let them be for lights in the firmament of the heaven to give light upon the earth: and it was so.”¹² The phrase “*and it was so*” is consistent in both Genesis and Modern Day Scripture sources; however, the phrase only indicates that it was done; it does not tell us how quickly it was accomplished.

There is also scriptural evidence to support God creating something to appear older. The event was turning water into wine. This was done at a marriage in Cana of Galilee and was attended by Jesus, his mother, and some of the Savior’s disciples. During the marriage, the host ran out of wine. The scriptures record, “His mother saith unto the servants, Whatsoever he saith unto you, do it. And there were set there six waterpots of stone ... Jesus saith unto them, Fill the waterpots with water. And they filled them up to the brim. And he saith unto them, Draw out now, and bear unto the governor of the feast ... When the ruler of the feast had tasted the water that was made wine ... And saith unto him, Every man at the beginning doth set forth good wine; and when men have well drunk, then that which is worse: but thou hast kept the good wine until now.”¹³

The creation abilities of the Savior are really demonstrated in this example. The wording of the scripture indicates that the water turned to wine instantaneously. As soon as the pots were filled with water, the servers were told to serve the wine to the guests. According to the scripture, it was not only wine—but the best wine that had been served all night.

Good wine is produced from excellent grapes picked at the proper time. The grapes are then skillfully processed and then aged. During this process, fermentation takes place. Alcohol is produced as well as sugars and carbonation. Most wine is aged for at least two years before it is released for sale. Some wine is aged up to 15 years before being sold.

The miracle of turning the water into wine demonstrates the Savior knows how to control the individual elements, and they respond to his command. As we recall from science in school, water is made by combining two atoms of hydrogen with one atom of oxygen. Oxygen and hydrogen are the only elements in water. The carbon element, for example, is not found in pure water.

When the water was turned into wine several more elements were introduced into the water and many other chemical compounds were created—sugars, acids, carbonation, alcohol, etc. Sugars are composed of carbon, hydrogen, and oxygen. Alcohol is also composed of carbon, hydrogen, and oxygen, but the elements are arranged differently to form the various molecules. Somehow during the process of turning the water into wine, carbon was introduced into the water. This carbon could have come from the

¹¹ Pearl of Great Price, Moses 2:6

¹² Old Testament; Genesis 1: 14-15 & Pearl of Great Price, Moses 2:14-15

¹³New Testament; John 2: 5-10

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containers—or some of the oxygen or hydrogen in the water could have changed into carbon. Then somehow, free hydrogen atoms and free oxygen atoms had to come from someplace to combine with the carbon atoms to create the sugars, alcohols, carbonation, and other various compounds. Then somehow, this newly made wine had to age for at least two years so that it would be delicious to the taste.

When we read the scripture explaining this miracle, it is easy to overlook the complexity of what was involved. We may not appreciate how it happened. As far as I know, mankind has never been able to duplicate this miracle. It's a marvel to consider the intelligence and power of the Savior to make this happen. Even the individual elements are subject to him.

Conclusions

So what conclusions can we make from this chapter about the creation?

1. Trying to define time before the creation of the solar system is impossible. Before the creation of the solar system, there was no such thing as a “day” or a “year.” Since the creation of the solar system happened on the fourth day of creation, there is no way to determine how long the first, second, and third days of creation were. We have no justification to declare that the first three creation periods were 24 hours in length. Since the wording at the close of each of the six periods of creation is the same, we cannot assume that any of the creation days were constrained to be 24 hours in length.
2. The word “day” as used in the scriptures describing the creation has three different meanings:
 - a. A period of time when it is light, i.e., “God called the light Day.”¹⁴
 - b. A 24-hour period, i.e., “let them be for signs, and for seasons, and for days, and years”¹⁵
 - c. A period of time describing an event, i.e., “And the evening and the morning were the ‘specified’ day.”
3. Regarding the Sabbath, the Lord could have used the word “day” as a metaphor during the various creation events—to metaphorically describe why the Sabbath should be every seven days.
4. Conclusion: The scriptures do not tell us the length of each period of creation—neither in day nor years. Therefore, we do not know how long the creation took.

Before we close this chapter, we should review another scripture. This is a Modern Day Scripture that adds to our understanding of the creation. The Lord told Moses, “And worlds without number have I created ... and innumerable are they unto man ... and there is no end to my works ... And now, Moses, my son, I will speak unto thee concerning this earth upon which thou standest; and thou shalt write the things which I shall speak.”¹⁶

This scripture tells us that the Lord has been in the business of creating worlds (and, we would assume, suns and stars, as well) for a long time—and it appears he will continue. It also tells us this earth is only one of his myriad creations. It doesn't take much imagination to picture the Lord's creations going back billions of years. Finally, God tells Moses to write the things which he shall speak. Therefore, the words we have are the words God wants us to have.

As we conclude this chapter, a couple of questions need to be asked: Does it really matter how long the creation took? Does it really matter whether it took 10 minutes, six days, a month, a year, or 13.8

¹⁴ Old Testament; Genesis 1:5

¹⁵ Old Testament; Genesis 1:14

¹⁶ Pearl of Great Price; Moses 1:33-40

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billion years? A Modern Day Scripture is appropriate here, “Now whether there is more than one time appointed for men to rise it mattereth not; for all do not die at once, and this mattereth not; all is as one day with God, and time only is measured unto men.”¹⁷ Apparently, when it comes to learning about the creation, God does not want us to be preoccupied with time.

Now for some good news. I’m not aware of any religious organization that teaches it’s a requirement for man’s eternal salvation to know the length of the creation in days or years. So we need not worry about it. The most important thing is to know that God is the creator! Why argue about calendar items when we should possess gratitude for the magnificent creations God has provided for us.

The other good news is for those who really want to know *how* God created all this. God has promised, in due time, we will know and understand. Modern Day Scripture says, “Yea, verily I say unto you, in that day when the Lord shall come, he shall reveal all things—Things which have passed, and hidden things which no man knew, things of the earth, by which it was made, and the purpose and the end thereof—Things most precious, things that are above, and things that are beneath, things that are in the earth, and upon the earth, and in heaven.”¹⁸

Someday, we will know everything. In the meantime, let us stand in awe of His wondrous creations!

¹⁷ Book of Mormon, Alma 40:8

¹⁸ Doctrine and Covenants; Section 101:32-34