

Science Week in Parishes 2019

An outreach of Science Week at The Cathedral

In an increasingly global and secular scientific culture, saturated with technology and the market, the science–faith conversation is at the cutting edge of Christian engagement.

Module #4: About the Moon

Hairdressers, students, science and God

Marion, an older member of the 8 am congregation at St Paul's Cathedral recounts the story of chatting to her hairdresser about attending church. "God! I don't believe any of that," the young hairdresser exclaimed. "There is no evidence for God." Marion felt awful and lost for words; she wanted to say something but could

"I believe in science, so I couldn't be religious."

Years at church had not equipped Marion or David for such moments.

think of nothing to say.

Meanwhile, David, a science student who is keen to share his Christian faith, is faced with the same predicament when his friends typically respond, "I believe in science so I couldn't be religious."

Despite their good intentions, years at church had not equipped Marion or David for such moments.

Science Week in Parishes

Marion and David's stories locate the science–faith conversation in everyday places. The stories also show the practical importance of introducing as many people as possible to this conversation.

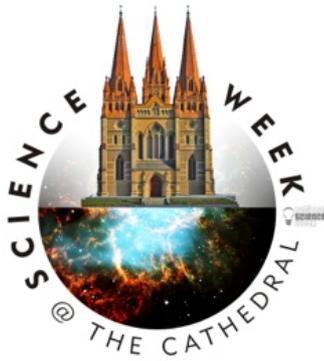
The material on the following pages is one of a number of 'modules' designed to promote helpful conversation in parishes about science and Christian faith.

- The modules are easy to use, designed for a minister or lay person to coordinate.
- We want this module to help people become more confident in answering your own questions about the science-faith conversation.
- The modules will help people be ready for moments such as Marion and David faced.

Some ideas ...

- Do you have a lay person in your parish who could lead a small group using modules such as this one?
- Do you have a scientist in your congregation? Why not invite them to speak about their work and their faith?
- Would you like a visiting preacher or speaker or discussion facilitator? We can help.

*Science Week in Parishes is an outreach of Science Week at the Cathedral, run every year around National Science Week in August. It offers ways for your parish to open this important conversation through activities at the Cathedral and by organising events, groups or speakers in the parish. **Further details:** Stephen Ames (sames@unimelb.edu.au), Chris Mulherin (ChrisMulherin@ISCAST.org), John Pilbrow (jpilbrow@bigpond.net.au).*



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In an increasingly global and secular scientific culture, saturated with technology and the market, the science–faith conversation is at the cutting edge of Christian engagement.

Module #4: About the Moon

There are many ways to use the Moon to open a conversation about science and faith. Group leaders might use some of the resources below.

1. To begin ... Moon facts

One way to begin is with a review of ‘facts about the Moon’ found especially in the first two links below which provide answers to many common ‘Moon questions’:

- <http://www.primaryhomeworkhelp.co.uk/Moon/facts.htm>
- <http://curious.astro.cornell.edu/our-solar-system/the-Moon>
- <https://www.scientificamerican.com/article/Moon-life-tides/>
- <https://www.accuweather.com/en/weather-news/sun-Moon-Earth-stars-life/30897365>
- <https://www.ntsif.org/about-tides/tides-faq>

Among many questions and issues, here are some examples:

- How was the Moon formed? The current science.
- The tipping of the Earth’s axis and the consequences for life on Earth.
- The Moon and the tides.
- Why do we always see the same ‘face’ of the Moon?
- Does the Moon contribute to Earth being a habitable planet for life?

Leaders of this ‘Moon module’ might select a set of questions drawn from the first two links above. The last question is a challenging one. The two links provide accessible positive answers, with plenty of science in support.

Further suggestions:

- Include the faith-science questions below.
- Arrange for a ‘report back’ to the parish.

The faith and science connection

The Moon in the Bible and the natural sciences

Genesis 1:14-18, says that on the fourth day God set lights in the firmament of heaven, to separate day from night, and let them be for signs and seasons and for days and years – the greater light to rule the day and the lesser light to rule the night – and that he also made the stars.

We find the same theme in Psalms 74:16; 104:19; 136:8–9. Psalm 147:4 says that God determines the number of stars and gives to all of them their names. Psalm 148:3–4 calls the Sun, Moon and Stars to praise God, so too the highest heavens and the waters above the heavens.

However, for many, many people these biblical affirmations indicate a straight out-clash with science and many people dismiss the Bible.

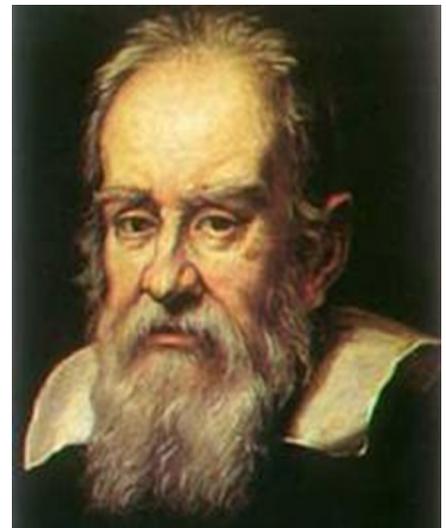
Many Christians try to reconcile the Bible and science by ‘stretching’ the text of Scripture over the science and say that the two are not in contradiction. For example, people will say that the order in which life arises in the opening chapter of Genesis is the same as in evolutionary theory. The problem with this approach is that science is made the authority to interpret Scripture and it turns attention away from seeking to understand the Bible passages in context.

An alternative is to be found in Galileo the famous 17th-century Catholic astronomer. Here is the short version with the longer version found in the box below: Galileo said that God is the author of two ‘books’ – the Book of Nature and the Book of Scripture. Because there is one author, namely God, the ‘two books’ cannot be in contradiction when both are correctly interpreted. Galileo believed that the Bible is about faith and morals; it is not about natural philosophy (science). For example, “the Bible is about how to go to heaven not how the heavens go,” he is reported to have said.

Following the teaching of St Augustine (354–430) Galileo said that if the Bible literally disagrees with the sciences where it speaks of the same matter (as it does for us now e.g., the sun going around the Earth), then we should hold to what the sciences say and seek a non-literal understanding of the texts that disagree. This calls for a deeper theological and ethical reading (faith and morals) of the Bible than what the ‘stretching of Scripture’ mentioned earlier is doing.

The deeper reading set out below is that the whole creation is God’s temple. All God’s creatures are called to worship God. This view can never be denied by science or made ‘out of date’. We may take this distinctive claim as informing how we are to live in this universe, beginning with care for the Earth. We can always ask what is being worshipped by our culture.

We can also ask what the sciences are serving.



Galileo and historical approaches to the Bible and science

Galileo (1564-1642), promoted the idea that the Earth moved in orbit around the sun, which he drew from Copernicus (1473-154) Galileo subsequently used the recently invented telescope to observe the Moon and the planets and showed how these contradicted the traditional Earth-centred view of the world, which is not the same as confirming the sun-centred view of the world. (Galileo was ahead of what his telescopic observations allowed.) Even this created a problem because the Catholic Church taught that the literal reading of the Bible was foundational for its meaning and the basis for the other symbolic ways of reading texts in the Bible. The Bible clearly supported the earth-centred view.

God is the author of Two Books

In response Galileo said that God is the author of two 'books' – the Book of Nature and the Book of Scripture. Because there is one author, namely God, the 'Two Books' cannot be in contradiction when both are correctly interpreted. Galileo believed that the Bible is about faith and morals. It is not about natural philosophy (science). For example, the Bible is about "how to go to heavens not how the heavens go," as he is reported to have said.

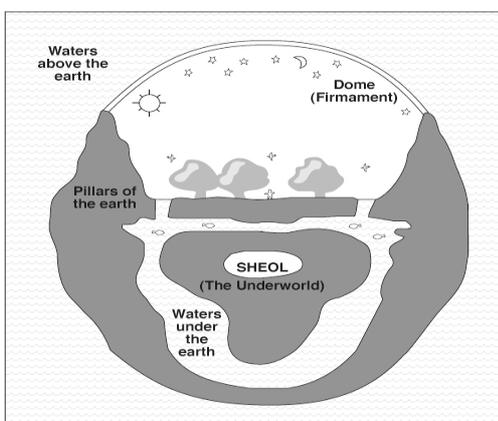
Following the teaching of St Augustine (354-430) Galileo said that if the Bible disagrees with the sciences where it speaks of the same matter (as it does for us now – e.g., the sun going around the earth), then we should hold to what the sciences say and seek to understand those parts of the Bible in terms of 'faith and morals'. This calls for a deeper theological and ethical reading of the Bible than what the 'stretching' mentioned earlier is doing. That kind of reading says, in effect, that God had nothing deeper to say about the world, through the Book of Scripture, than what God was saying through the Book of Nature.



What might that deeper reading be? Well there may be more than one such reading just as there is one Jesus but four Gospels. Remember, this deeper reading is attempting to say what God, the author of the Book of Scripture, is wanting to communicate to us beyond what God is communicating through the creation (see Romans 1: 19-20).

Here is a deeper reading of Genesis chapter 1 from the work of John Walton in his book, *Genesis 1, Ancient Cosmology*, (Eisenbrauns, 2011). Walton is Professor of Old Testament at Wheaton College. He was a professor at Moody Bible Institute for 20 years. He specialises in the Ancient Near Eastern (ANE) backgrounds of the Old Testament. Briefly, he points out that temples were everywhere in the ANE (Egypt, Mesopotamia). However long it took to build a temple, there was common practice across the ANE of inaugurating the temple in seven days of ceremonies. Temples were intimately connected to the cosmology of the day. The temples were understood as "models in miniature of the cosmos and were replete with cosmic symbolism ... and deities rested in the temples that had been constructed for that purpose" (Walton, 178). Everywhere, the temple inauguration is a seven-day process leading to the god taking up residence on the seventh day for 'rest', making the temple functional. Here 'rest' means the god is enthroned and so rules from the temple.

The structure and meaning of the cosmos in Genesis 1.1 -2.3



There was also a common structure (details vary) of cosmology across the Ancient Near East. Therefore, if anything is being revealed by the first verses of Genesis, it is not the cosmology. That was common knowledge. Rather the cosmology is being used to say something about God and the world. But what?

Walton tells us that Israel shared a functional understanding of what it means to exist: it is to have a function and purpose within an ordered cosmos. The pre-cosmic environment is portrayed throughout the ANE as involving primordial waters and darkness. It is a world without function not without

matter – water and darkness. The focus is not on where the water came from, but that it had no function/purpose. The most important question answered in every ancient cosmology is 'who is in charge?' Across the ANE the primary answer is: divine rule in the cosmos (however the gods may be

understood). Through the seven days of ceremonies for the temple inauguration, it was only after the functions of the temple were named, the functionaries installed, and the god enters to 'rest' in the temple, that the temple is functioning (i.e., actually exists). Across the ANE the idea never extended to make the cosmos the god's temple. Nor is this stated in Genesis, but the evidence suggests this is the idea:

- seven-day building/ inauguration;
- functions named (days 1-3) and functionaries installed (days 4-6)
- God 'rests' on the seventh day

This reading of Genesis is a radical interpretation of the whole cosmos as God's temple and is unique to Israel. The 'seven days' are not about how long it literally took God to create the universe, 6,000 to 10,000 years ago. The story of God creating a functioning universe over seven days, with God resting on the seventh day, is cast in the form of the familiar rites of temple inauguration, with the universe characterised in terms familiar across the ANE. This is to make the theological point that the whole creation is God's temple.

This part of Genesis is a recognisable creation narrative which has been compared to other creation narratives in the ANE. This comparison includes many important matters, for example, the sun, moon and stars are creatures; they are not to be worshipped. However, in contrast to Mesopotamian literature where people are the slaves of the gods, in Genesis men and women together are humanity as a partner under God in the work of ruling – in the image of God not in the image of an idol.

At the very least we should think that all creatures that make up the cosmos as God's temple are fundamentally about the worship of God. Within the Bible see, for example, Psalms 96, 98, 104, 145, 148, ... Psalm 19.1 The heavens declare the glory of God and the firmament shows his handiwork. The idea of the cosmos as God's temple appears in Isaiah 66:1-2. This idea is taken to a new level in the New Testament by interpreting both in relation to Christ e.g., Ephesians 1:9-10; 2:21, 22; 3:7-12.

How does this connect to the scientific view of the world?

This leave for reflection how this theological theme connects in any way with the scientific picture of the universe. This might refer to the intelligibility of the universe, the lawfulness of its operation, the beauty of the physical laws and of the life forms that are produced. Theologically, they all testify to their creator – just as Psalm 19:1 says, "the heavens declare the glory of God and the firmament tells his handiwork."

Many religious people also look to the fact that the physical laws and constants of our universe are fine-tuned for life. To them this suggests the handiwork of God. The main alternative view is the multiverse proposal, which says there are a huge number of universes in a more abstract space, each with different laws and constants. On this alternative, there is then nothing special about our universe being 'fine-tuned' for life; it just turned out to have laws and constants that are 'just right' for producing life.¹

There is no need to take the ancient cosmology common across the ANE, as what is being revealed through the text of Genesis 1. Rather, the distinctive theological note is that the universe created by God is God's temple. This understanding can never be denied by the natural sciences or made 'out of date'. We may take this distinctive claim from Genesis 1 as applying to the universe now, with the natural sciences showing us so much more of its history and operation on so many levels. After all, it is the same universe in which we can see more and more of God's handiwork, with more to come into view! We may also take this distinctive claim as informing how we are to live in this universe, beginning with care for the earth. What else? For example: What does our culture worship? What does science serve?

¹ Davies, P., *The Goldilocks Enigma, Why Is The Universe Just Right For Life?* (London: Allan Lane, 2006).

2. Establishing a base on the Moon raises interesting questions about the Moon and us.

(a) Leaders could organise a visit to the Melbourne Planetarium at Science Works for 'Moonbase One'. (See this 30-second trailer: <https://www.youtube.com/watch?v=LJb9pHeckhM>.) The project is about building a sustainable base on the Moon and how the base will be used. Why not arrange for a discussion at the Planetarium about what you have seen?

In August, 'Moonbase One' is showing at the Planetarium on Saturdays and Sundays at 2.30pm, and at 3.00pm on weekdays. For tickets: <https://museumsvictoria.com.au/scienceworks/whats-on/museum-entry/tickets/>

(b) Alternatively, you could display and discuss one or all (24 minutes in total) of the following short videos:

- <https://www.youtube.com/watch?v=E-lq2ErdlXY> (8 min)
- <https://www.youtube.com/watch?v=j0TPJQSmAHU> (6 min)
- <https://www.youtube.com/watch?v=1MaYY3kacXU> (2 min)
- https://www.youtube.com/watch?v=Xe_nuRMH30c (8 min)

Further suggestions:

- Include the faith-science questions below.
- Arrange for a 'report back' to the parish.

The faith and science connection

Human beings have the knowledge and power to inhabit the Moon and to Mars and beyond. One question faith asks is whether this exploration and migration to other planets is part of God's purpose for humankind? Here are some reasons why it might be:

- God has given extraordinary powers to humankind along with the freedom to use them responsibly (Genesis 1:26-28; Psalm 8).
- The 'terrestrial' and 'celestial' realms are one, so we are not confined to planet Earth.
- God's purpose is to unite all things in heaven and earth in Christ (Ephesians 3:11-12, 1:9-10).

However, there are also reasons to be cautious about such grand plans. We need to beware of idolatry – of worshipping the work of our own hands – as Psalm 115 warns: we become like what we worship – dehumanized!

Notice, the first commandment commands us and so authorises us to have access to all our heart, mind, soul and strength in the worship of the living God. Worship of this God brings us towards truly human living.

- Can anyone be sure that we won't simply transport all our problems to another place? For example, will the proposed 'colonisation' of other planets be like the colonisation we have known on planet Earth?
- Is there a conversion of mind and hearts needed first – for those going to the Moon and for us whom they inevitably represent?

If you have enjoyed this module why not try Module #3: Moon to Mars.