

FACT OR FICTION?

Answer Key & Further Resources

Here are the answers, with links to further resources on the Reasons to Believe website. We hope you'll explore them with an open mind and go on to research other questions you may have about the intersection between science and faith.

1. People who take the Bible literally believe that creation happened in six 24-hour days sometime between about 6,000 and 10,000 years ago.

THIS IS FICTION. Throughout the history of Christianity, there has been lively debate over the exact nature of the “days” in the biblical creation account. One thing we know about biblical Hebrew is critical to the conversation: the word for “day” in this passage and in other parts of the Old Testament has multiple *literal* meanings. In various contexts it means (a) a portion of the daylight hours; (b) all of the daylight hours, from sunrise to sunset; (c) the period from sunset to sunset; or (d) a finite time period, such as an epoch or era.

Within the first two chapters of Genesis, the Hebrew word for “day” is used in each of these four literal ways. **Given the full range of contextual clues and comparison with the full range of biblical texts on creation, the literal meaning of “day” that yields the most consistent interpretation of the passage is the day-age usage, but other views are also possible.** The most prominent among them are presented on our website.

For more information, visit our [Days of Creation reference page](#) and [watch this brief video](#).

2. Evolutionary theory can readily explain why organisms in different branches of the phylogenetic tree develop virtually identical features.

THIS IS FICTION. “Convergence” is the biological term for unrelated organisms possessing virtually identical anatomical and physiological characteristics—such as

the wings of birds and bats. Evolutionary theory attempts to explain this similarity as the result of unrelated organisms encountering nearly identical selection pressures (environmental, competitive, and predatory). **However, from an evolutionary perspective convergence occurs far too often and in organisms living in widely diverse environments—such as the chameleon and the sand lance (a fish) that share the same complex eye structure.**

For more detailed information about convergence, read [“Convergence: Evidence for a Single Creator”](#) and [“Déjà Vu Again.”](#)

3. The existence and abundance of viruses argue against belief in the biblical Creator God.

THIS IS FICTION. Many people believe that viruses, which cause so much sickness and suffering, are incompatible with the creative work of a loving God. Yet new research suggests that viruses also play a key role in nutrient cycling in Earth’s oceans and can be used to combat drug-resistant bacteria. **The same properties that make viruses harmful to life also turn out to be the ideal properties for certain salutary biomedical applications.**

For more about the role viruses play, read [“Viruses and God’s Providence”](#) and [“Zika Virus in the News.”](#)

4. Latest advances in RNA research move scientists closer than ever to solving the mystery of life’s origin.

THIS IS FICTION. A recent research study seems to suggest that life might have arisen through natural processes via replication of the RNA molecule on a “snowball Earth.” However, the RNA chosen for this study turns out to be atypical. Unlike nearly all RNA, it retains its structure in cold temperatures. **Since losing structure in cold temperatures is a normal feature of RNA, it seems an unlikely source of life in the “snowball Earth” scenario.**

For more information on recent RNA research and its relevance to the origin of life discussion, read [“Do the Latest Advances in Origin-of-Life Research Put the Case for Intelligent Design on Ice?”](#) and [watch this brief video.](#)

5. Multiverse theory is compatible with biblical teaching on creation.

THIS IS A FACT. The question of whether or not we are part of a multiverse raises a host of philosophical and theological questions about the meaning of human life and the nature of reality. However, the theory does not and cannot escape the ultimate

need for an origin and Originator, given the finiteness of matter and energy. In a most intriguing sense, **the Bible does teach that another realm, or greater reality, exists beyond the cosmos.** The biblical Creator exists in a realm that's unconfined by the familiar limits of time and space, and humanity's future home (according to Revelation) is unconstrained by the familiar laws of physics, including the law of decay.

Some atheists agree that consciousness cannot be reduced to purely physical components. Consequently, no rearranging of all the atoms in the universe can give you human consciousness.

For more on multiverse theory, visit our [Multiverse reference page](#), read ["Q&A: Does a Multiverse Negate Biblical Truth?"](#) and [listen to this podcast](#).

6. Among the 2,000+ planets discovered to date, at least a small percentage meet the criteria for human habitability.

THIS IS FICTION. The current claims of "habitability" are misleading. In the case of the "habitable" planets discovered so far, the sole criteria has been whether or not the planet could conceivably have had liquid water on some part of its surface for at least a brief period of time. **In recent months, astrophysical research literature has begun to acknowledge how inadequate this definition is, as liquid water and many other factors must be present for billions of years to make a planet capable of supporting life, especially complex life.**

For more information on "habitability" and the problems it poses, read ["Long-Term Habitability Requires a Sun-Earth Twin"](#) and ["Planet Habitability Requires a Lifetime of Fine-Tuning,"](#) and [listen to this podcast](#).

7. Recent research indicates that human intelligence differs from that of animals not only in degree but also in kind.

THIS IS A FACT. If Darwin's idea of natural descent were true, one would expect (as Darwin did) that organisms with similar ancestry would have similar cognitive abilities. However, the natural world provides many instances of cognitive behavior in "lower" animals surpassing that of "higher" animals. For example, ravens are able to make use of one tool to obtain a second tool with which they can obtain food. They show an intellectual capacity that apes and chimps lack, one that more closely resembles human cognition. This and other recent research highlights **the qualitative difference in intelligence between supposedly related organisms, the greatest gap being that between humans and all other species of life.** Only humans, for example, have the capacity for symbolic language, for abstract thought, and for communication unrelated to mere survival or comfort.

For more about the difference between human and animal intelligence, read "[The Exceptional Human Brain](#)" and "[The Origin of Soulful Animals](#)," and [listen to this podcast](#).

8. The central dogma of molecular biology points to natural-process evolution.

THIS IS FICTION. The central dogma of molecular biology states that biochemical information flows from DNA through RNA to proteins. One of the leading evolutionary models for the origin of life states that RNA was the original building block of life, with DNA and proteins arising later. In this view, RNA's role in the central dogma of molecular biology is a kind of "artifact" of evolution. However, recent research suggests that "biomolecules" such as DNA, RNA, and proteins are a universal requirement for life. **This means that RNA alone could never have sustained life and DNA, RNA, and proteins all had to be in place at the moment of life's origins.**

For more on DNA, RNA, and the origin of life, read "[How the Central Dogma of Molecular Biology Points to Design](#)" and "[Lost in a Masquerade: Horizontal Gene Transfer Impersonates Common Ancestry](#)," and [watch this brief video](#).

9. Quantum physics substantially challenges the biblical notion of a cosmic creation event.

THIS IS FICTION. In 2015, a paper by two physicists published in a journal of speculative science claimed that the big bang was not necessary and the universe might have existed forever. However, it is important to note that their paper was—by their own admission—preliminary and was published in the journal's "theory" section. It also remains completely untestable. Perhaps most important, their "conclusion" that all matter in the universe couldn't be traced back to a single origin (the big bang) was not actually a reasoning from evidence; it was a necessary feature of the physical model they were proposing. **Based on the evidence, some version of the big bang model remains the most compelling model of the universe's beginning.**

For details on their idea, read, "[Have Quantum Physicists Disproven the Big Bang?](#)" and [listen to this interview](#). For more on quantum physics, read "[Quantum Mechanics and the Nature of Reality](#)."