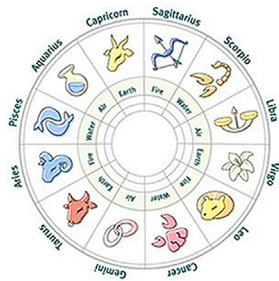


# Astrology: Is it scientific?



In some ways, astrology may seem scientific. It uses scientific knowledge about heavenly bodies, as well as scientific sounding tools, like star charts. It generates expectations about future events and people's personalities, much as scientific ideas generate expectations for testing. And it claims to be supported by evidence based on the experiences of the many people who feel that astrology has worked for them. But even with these trappings of science, is astrology really a scientific way to answer questions?

Use the Science Checklist to evaluate astrology, and see if you think it qualifies as scientific:

**Focuses on the natural world?** Astrology's basic premise is that heavenly bodies—the sun, moon, planets, and constellations—have influence over or are correlated with earthly events.

**Aims to explain the natural world?** Astrology uses a set of rules about the relative positions and movements of heavenly bodies to generate predictions and explanations for events on Earth and human personality traits. For example, some forms of astrology predict that a person born just after the spring equinox is particularly likely to become an entrepreneur.

**Uses testable ideas?** Some expectations generated by astrology are so general that *any* outcome could be interpreted as fitting the expectations; if treated this way, astrology is not testable. However, some have used astrology to generate very specific expectations that could be verified against outcomes in the natural world. For example, according to astrology, one's zodiac sign impacts one's ability to command respect and authority. Since these traits are important in politics, we might expect that if astrology really explained people's personalities, scientists would be more likely to have zodiac signs that astrologers describe as "favorable" towards science.<sup>1</sup> If used to generate specific expectations like this one, astrological ideas are testable.

**Relies on evidence?** In the few cases where astrology has been used to generate testable expectations and the results were examined in a careful study, the evidence did not support the validity of astrological ideas.<sup>2</sup> This experience is common in science—scientists often test ideas that turn out to be wrong. However, one of the hallmarks of science is that ideas are modified when warranted by the evidence. Astrology has not changed its ideas in response to contradictory evidence.

**Involves the scientific community?** Sharing one's findings and critically evaluating the results of others are not integral parts of practicing astrology. An astrologer can go his or her entire career and not present findings at a scientific meeting or publish a single article. When astrologers do publish, these articles are not usually peer reviewed or published in places where they will be critically scrutinized by the scientific community.

**Leads to ongoing research?** Scientific studies involving astrology have stopped after attempting and failing to establish the validity of astrological ideas. So far, there are no documented cases of astrology contributing to a new scientific discovery.

**Researchers behave scientifically?** Scientists don't wait for others to do the research to support or contradict the ideas they propose. Instead, they strive to test their ideas, try to come up with counterarguments and alternative hypotheses, and ultimately, give up ideas when warranted by the evidence. Astrologers, on the other hand, do not seem to rigorously examine the astrological ideas they accept. As reflected by the minimal level of research in the field, they rarely try to test their arguments in fair ways. In addition, the astrological community largely ignores evidence that contradicts its ideas.



those issues.

	<b>Capricorn (Dec 22–Jan 19)</b> Family matters take precedence today; put your own personal plans on hold until the business is resolved. If there is time, indulge yourself—your sacrifice deserves to be rewarded.
	<b>Aquarius (Jan 20–Feb 18)</b> A friend needs a shoulder to cry on—be supportive. Things are looking up; it might be a good day to buy a lottery ticket. Avoid confrontations with strangers.

Many astrological predictions appear in newspapers — not in places where they will be scrutinized by the scientific community.

Now it's up to you. Is astrology science?

## Science checklist:

How scientific is it?

- Focuses on the natural world
- Aims to explain the natural world
- Uses testable ideas
- Relies on evidence
- Involves the scientific community
- Leads to ongoing research
- Benefits from scientific behavior

<sup>1</sup> In fact, physicist John McGervey did this study and found no bias towards particular signs. Hence, the results did not support the validity of astrological explanations. You can read about this study in McGervey's book "Probabilities in Everyday Life."

<sup>2</sup> For example: Carlson, S. 1985. A double-blind test of astrology. *Nature* 318:419–425.

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