

Name: _____ Period: _____ Date: _____

CONPTT: Is It Science? Is It A Scientific Statement?

1. Consistency: _____

1. *Walking under a ladder will cause bad luck.*
2. *Green plants will grow towards a light source.*

Using the idea of “**Consistency**,” which of the above statements is science and which is not. Explain your answer.

2. Observability: _____

1. *Some plants are carnivorous (eat animals).*
2. *Extraterrestrial beings have visited Earth.*

Using the idea of “**Observability**,” which of the above statements is science and which is not. Explain your answer.

3. Natural: _____

1. *Green plants convert sunlight into energy.*
2. *There is life after death.*

Using the idea of “**Natural**,” which of the above statements is science and which is not. Explain your answer.

4. Predictability: _____

1. *Without sunlight (or comparable artificial light), green plants will die.*
2. *Capricorns are difficult*

Using the idea of “**Predictability**,” which of the above statements is science and which is not. Explain your answer.

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5. Testability: _____

1. *The Bermuda Triangle causes ships and planes to sink and disappear.*
2. *Life comes from life and cannot come from non-life.*

Using the idea of “Testability,” which of the above statements is science and which is not. Explain your answer.

6. Tentativeness: _____

1. *The number of human chromosomes was once thought to be 48, but no, thanks to better microscopy it is now considered to be 46.*
3. *We know that the world began about 6000 years ago, and nothing will change that.*

Using the idea of “Tentativeness,” which of the above statements is science and which is not. Explain your answer.

What if it does meet all the criteria?

What is “emerging science”?

- ✦ Tends to conform to CONPTT, but falls short in one or two criteria
- ✦ Also called protoscience, a “near science”
- ✦ Consistent observations and predictions limited by knowledge and/or technology
- ✦ Ex: Chiropractors, mental telepathy

What is “non-science”?

- ✦ Does not meet criteria of CONPTT
- ✦ Non-science topic areas may be very logical, based on good reasoning and are very important to society, but simply do not fall within the realm of science. Science is based on evidence, not faith
- ✦ Ex: Religion, philosophy, ethics.

What is “false science”?

- ✦ Also known as pseudoscience
- ✦ Non-science portrayed as a legitimate science
- ✦ Ex: astrology, creation science

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Evaluate these statements with the CONPTT criteria. Put a check mark in each cell of the table for which the statement meets the criteria. Based on the number of boxes filled

1. Astrology is said to be able to predict the events of one's life from the positions of the heavenly bodies at the time of one's birth. No experiment has ever validated a single aspect of astrology, and no one has ever explained how astrology works.

| | Consistent | Observable | Natural | Predictable | Testable | Tentative |
|-----------|------------|------------|---------|-------------|----------|-----------|
| Astrology | | | | | | |

Is this science? If not what is it? non-science, pseudoscience, or emerging science. Explain your answer:

2. In 1869, the Russian chemist Dmitri Mendeleev developed a table showing the chemical elements known at the time. He claimed that this periodic table showed that there were undiscovered elements and he made predictions about their properties. These elements were eventually discovered and their properties closely matched Mendeleev's predictions.

| | Consistent | Observable | Natural | Predictable | Testable | Tentative |
|----------------|------------|------------|---------|-------------|----------|-----------|
| Periodic Table | | | | | | |

Is this science? If not what is it? non-science, pseudoscience, or emerging science. Explain your answer:

3. Many people claim to have been abducted by aliens in UFOs and given physical examinations. However, there is no third-party evidence to the abduction or the presence of alien spacecraft and the abductees show no physical signs of anything unusual having happened to them.

| | Consistent | Observable | Natural | Predictable | Testable | Tentative |
|------|------------|------------|---------|-------------|----------|-----------|
| UFOs | | | | | | |

Is this science? If not what is it? non-science, pseudoscience, or emerging science. Explain your answer: