

SCIENCE KNOWLEDGE SURVEY

AGREE or **DISAGREE** with each statement below by marking “**T**” if you think the statement is true or “**F**” if you think the statement is false. If you are unsure, pick whichever answer you are most leaning toward. Later, you will share your answers with your group and debate any you disagree on. Then, we’ll go over them as a class.

T or F STATEMENT

- T** 1. Science is a process of asking and answering questions.
- F** 2. Science can solve **any** problem or answer **any** question.
- T** 3. Science is only concerned with understanding how the natural world works.
- F** 4. Science can use **faith-based or supernatural** explanations if necessary to explain a phenomenon.
- F** 5. Astrology (using the alignment of stars and planets to predict future events) is a type of **science**.
- T** 6. Creativity is an important tool for scientists when developing explanations or designing investigations.
- T** 7. Science can only provide tentative answers or explanations.
- F** 8. A scientific theory is an idea that **has not yet been supported with enough evidence to become a law**.
- T** 9. Scientists can have religious faith and pursue things like art or philosophy outside of science without interfering with their ability to do science.
- F** 10. Science is most concerned with **collecting facts**.
- T** 11. Most engineers and medical doctors are actually scientists.
- F** 12. Scientific explanations are **permanent** ideas that are **indisputable** (not open for debate).
- T** 13. Science can be done poorly.
- F** 14. A scientific theory is a **guess or a hunch** that a scientist has about a topic.
- F** 15. Scientists have solved **most of the** major mysteries of nature.
- T** 16. Scientists run multiple trials to increase their confidence in the data.
- T** 17. If a hypothesis is tested and shown to be inaccurate, scientists view this as a success.
- F** 18. The goal for science is to **prove** a theory or idea to be correct beyond a reasonable doubt.
- T** 19. Scientific knowledge is built from a careful analysis of the empirical evidence (all of the existing research on a topic).
- T** 20. A scientific law describes a natural phenomenon that happens consistently under specific conditions.
- T** 21. Scientists use predictions to test their hypothesis.
- T** 22. If a scientific explanation is shown to be inaccurate, it may be modified (changed).
- F** 23. In order for a process to be considered “scientific”, it must follow “**The** Scientific Method”.
- F** 24. The tentative nature of scientific knowledge is considered a **weakness** of science.
- T** 25. Scientists prefer to use phrases such as “the results support...” rather than to say they have “proven” an explanation correct.