What is Science? (6-8) Answer sheet

The Scientific Method (simplified)

Scientists use a three-step process when they conduct research. Read the steps below and determine the correct order. Write the correct number in the boxes next to each step.

3 Accept, refine, alter, expand or reject hypothesis: based upon the test results, scientists and inventors accept, reject or change their hypothesis. It often takes several attempts to obtain the results the scientists want to achieve. This is especially true for creating new things.

1 Develop hypothesis (idea): scientists develop an idea (hypothesis) to test. This could be something simple like confirming the presence of air or something really complicated like designing a new rocket.

2 Test hypothesis by gathering data or experimenting: scientists test hypothesis by gathering information. This can be done by researching what others have discovered or conducting experiments. If we were building a new type of rocket, this step could include launching it.

Answers to the multiple-choice questions:

1. Reasons we should not always trust scientists include:
    a. Scientists are people and make mistakes
    b. Some scientists do not believe in God
    c. Some scientists are paid by organizations that are anti-God
    d. All of the above

2. Scientific research and the published results are influenced by:
    a. Peer pressure
    b. Pride
    c. The worldview of the scientists
    d. Politics
    e. Source of the funding
    f. All of the above

Some examples of mistakes that secular scientists have made:

1. “The universe has always existed”

   This has been refuted by the Second Law of Thermodynamics—everything in our universe is winding down, so it must have had a beginning.

2. “Life can arise from non-living chemicals”

   Louis Pasteur thoroughly refuted this idea. His research ultimately led to the Law of Biogenesis—all life comes from life.

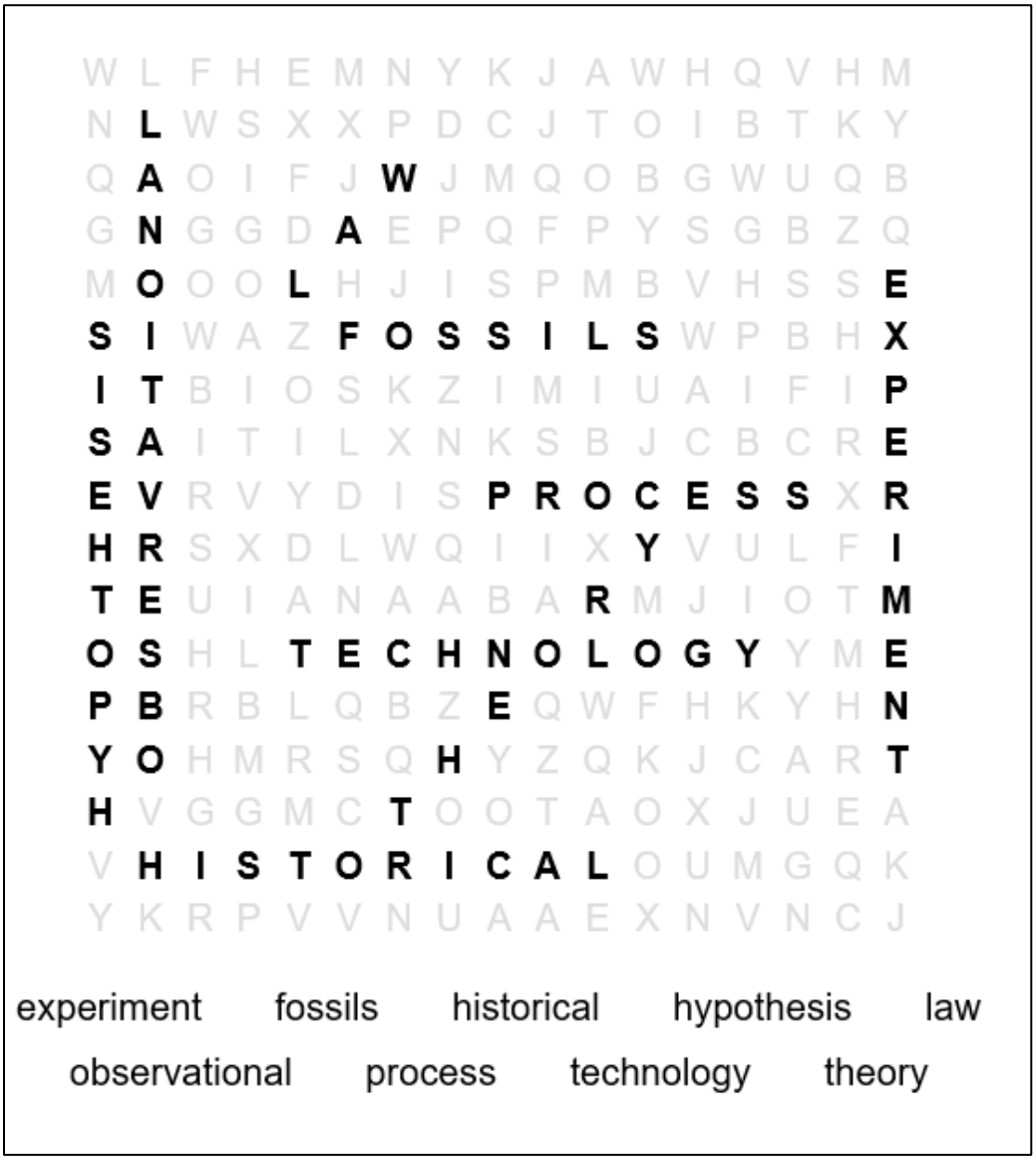
3. “Human vestigial organs”

   Scientists once claimed that tonsils, the appendix, the coccyx (tail bone) and other organs were useless leftovers from evolution. We now know that all of these organs serve important purposes. For example, the appendix is part of our immune system.

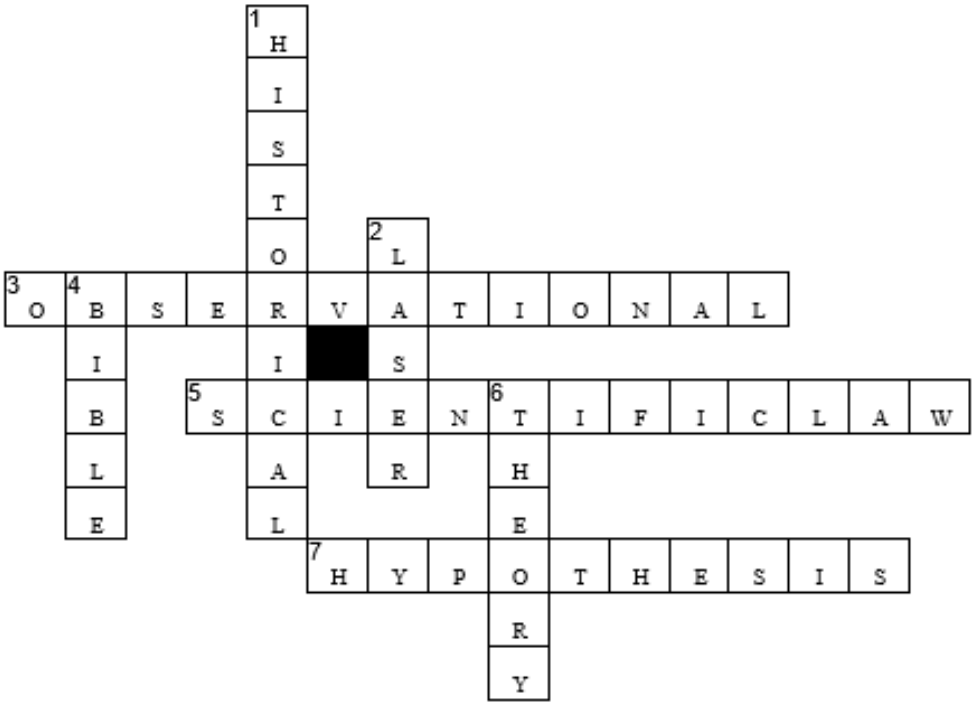
4. “Junk DNA”

   Scientists once claimed that the human body has a lot of leftover DNA from evolution that no longer serves any purpose. We now know that this DNA is not junk and serves some very important functions.

Answers to the word search



Answers to the crossword puzzle



Across

3. Type of science that uses testable, repeatable experiments.
5. Assumed to always be true under the same circumstances
7. An idea that can be tested

Down

1. Type of science that can be very subjective
2. We used one of these during our experiment in the video
4. We should always use the _____ to see if what we are being told is true.
6. Attempt to explain things that have already been substantiated by data