

Article-Based Observation

Directions: Read the “News in Brief” section and then answer these questions. They are subdivided into questions about each news brief.

“Extreme gas loss dried out Mars”

1. Data collected by NASA’s MAVEN spacecraft quantifies how much of Mars’ atmosphere has been lost over time. Describe the general experimental process that Bruce Jakosky and his colleagues used to determine the amount of gas lost.

2. Based on the information in the article, what did researchers suggest could have been the reason that the planet’s climate has changed? Explain.

“Thinning ice creates undersea greenhouses in the Arctic”

3. What hypothesis is being explored in the research described?

4. Oceanographer Christopher Horvat and his colleagues created a computer simulation of the thickness of sea ice over time. What observations did they make from their research? Did this observation support the hypothesis?

“Food odors entice tired brains”

5. What were the independent and dependent variables? How were possible confounding factors controlled?

6. What did researchers report about the connection between sleep and sensitivity to odors?

“More brain differences seen between girls, boys with ADHD”

7. What are some of the behavioral differences between boys and girls who have attention-deficit/hyperactivity disorder, or ADHD? According to neurologist Stewart Mostofsky, what are some differences found in the structure of the brain of boys and girls with ADHD?

8. Mostofsky and his colleagues collected data from “18 subjects in each of the four groups.” What are the four groups and what plan do the researchers have for the number of test subjects?