

Mystery of Matter Part II

1. Identify at least one laboratory practice that the scientists in the program use that would not fly with our current safety regulations.
2. Do you think that Davy was brave or reckless or both in his handling of unknown gases? Explain.
3. What evidence did Davy use to refute Lavoisier's assertion that heat is a substance?
4. One risk of Davy's experimentation with laughing gas was addiction. His use of toxic gases in general is also considered the cumulative cause of his death at age 50. However, his risky experimentation paved the way for several discoveries, including the discovery of an anesthesia that suppresses pain during surgery. Was this kind of risk acceptable? Why or why not?

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5. Electricity is a source of energy. Why might energy be needed to split water into oxygen and hydrogen gases?

6. Most of the people who came to Davy's lectures were not scientists. Davy carefully prepared his lectures, and as a result; his demonstrations and explanations of scientific processes and discoveries were clear and understandable. Why is it important for scientists to clearly communicate their work to all people?

7. A common **science practice** involves advancing scientific knowledge by *using new evidence to build on earlier knowledge*. Another is *developing and using models*. Identify places where these are demonstrated in the program.