

The Scientific Theory

The theory you are investigating:

Based on your investigations, answer the following questions as yes or no, and then provide a brief explanation to justify your answer.

1. Is the theory consistent with what is already known? Or does the theory require additional assumptions? Does it have weaknesses in logic resulting from inconsistencies with what is already known?
2. Does the theory describe and explain observed phenomena?
3. Is the theory testable and falsifiable based upon controlled, repeated experiments?
4. Is the theory correctable and dynamic? Can changes be made as new data are discovered?
5. Does the theory pose a new set of scientific problems upon which scientists may work? Does it suggest a problem-solving model to help resolve these new problems? Or does it provide definitions of concepts or operations that will help other scientists solve problems?
6. Is the theory progressive? Does it achieve all that previous theories have and more?
7. Is the theory consistent with all pre-existing related theories that already have established scientific validity?