At this stage, personal opinion must be put aside and both sides of the debate must be given equal credence. This gradual accumulation of knowledge dictates the overall direction of science and is tested, usually by manipulating variables, showing how levels of the greenhouse gas have changed over time. It is important to remember that science and philosophy are intertwined and are essential elements of human advancement, both contributing to the way we view the world. Scientific philosophy.

No theory or hypothesis can ever be completely proved or disproved, but research enables us to test hypotheses and lay solid foundations for future research. This stage is where you must make a statement of intent and develop a strong hypothesis. For example, in the case of global warming, there is an opposing view that temperature rises are natural and that the effect of human society is making little difference. Kuhn, T. (1996). The Structure of Scientific Revolutions. Chicago, IL: University of Chicago Press.

After determining the causes, the next layer of the research process is to try to find possible explanations of 'Why?' and 'How?' things are happening. This is often the 'business end' for many areas of scientific research and is where one of the procedures are then utilized to either prove or disprove the hypothesis and generate numerical data that can determine the relationship between the manipulated variable and the observed or measured variable. Bauer, H.H. (1994). The Logic of Scientific Discovery. London, UK: Routledge.

Read more about the principles of scientific research. Popper, K. (2002). The Logic of Scientific Discovery. London, UK: Routledge. For example, in the case of global warming, there is an opposing view that temperature rises are natural and that the effect of human society is making little difference. If we look at a topical example, Global Warming is an area with which most of us are familiar and has been the subject of thousands of studies. Intuitively, most of us would state that the historical levels of carbon dioxide throughout history. In this experiment, time would be the manipulated variable, showing how levels of the greenhouse gas have changed over time.

In this stage you may express your personal opinion, favoring one side or the other. You must, however, keep an open mind and understand that there is a chance that you may be wrong. Kuhn, T. (1996). The Structure of Scientific Revolutions. Chicago, IL: University of Chicago Press. After determining the causes, the next layer of the research process is to try to find possible explanations of 'Why?' and 'How?' things are happening. This is often the 'business end' for many areas of scientific research and is where one of the procedures are then utilized to either prove or disprove the hypothesis and generate numerical data that can determine the relationship between the manipulated variable and the observed or measured variable. Bauer, H.H. (1994). The Logic of Scientific Discovery. London, UK: Routledge.