Evolution of the Scientific Method Podcast (In Our Time)

TOK

**Instructions:**

As we listen to the discussion on the evolution of scientific method, use the below scaffolding sheet to take notes.

1. How does Schaffer define the Scientific Method?
2. How did the Greeks (Aristotle and Plato) rely on Mathematics to structure their early inquires?
3. Explain the roles of induction and deduction in the Scientific Method. Provide examples to demonstrate how each works.
   1. Deduction (General premises to a specific conclusion):
   2. Induction (specific instances to a general rule):
4. What was the contribution of Francis Bacon’s *Nova Organum?*
5. “Galleo marked a turning point in the scientific method.” What did he change through his controversy with the Catholic Church?
6. How does Newton formalize scientific reasoning? What rules does he develop?
7. What is the Mills vs. Whewill debate and how does it shape causality in the scientific method?
8. What is a hypothesis and why is it significant?
9. How did Darwin’s *Origin of the Species* challenge the process of the method?
10. How did Einstein challenge the view that scientific knowledge is cumulative?
11. What is falsification and how did flip the scientific method?
12. What distinguishes science and pseudo-science? What examples do they provide?
13. How did Thomas Kuhn’s *Structure of Scientific Revolution* change how we view the development of science?
14. What are the conclusions the panel comes up with for the current view of the scientific method?