

# **Explanations, Theories and Laws**

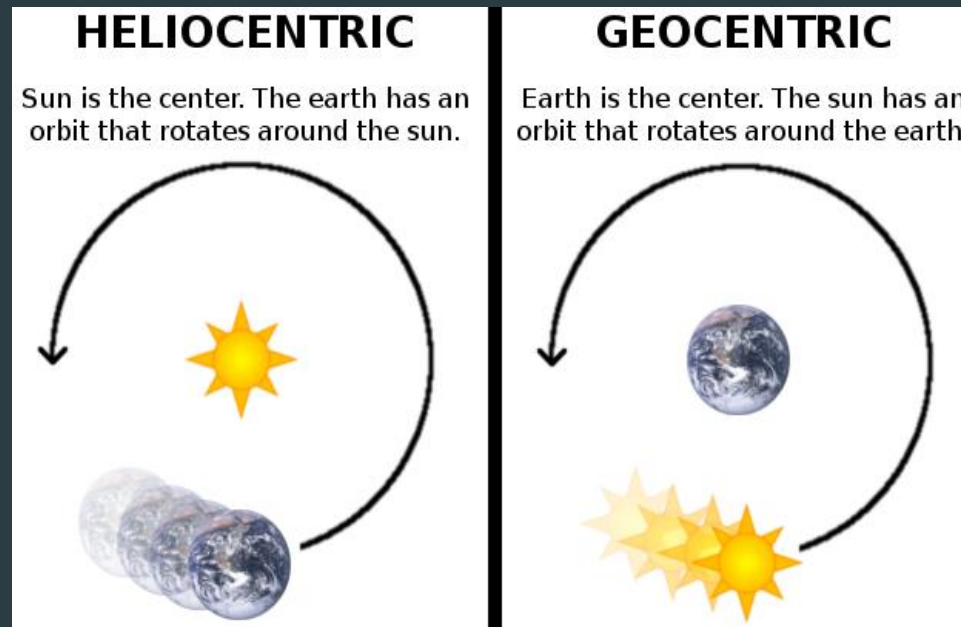
# Scientific Explanations

- ❑ It is a **hypothesis** that has passed the widest and most comprehensive series of tests.
- ❑ Still subject to **review** and consideration.
- ❑ May be elevated to a **theory** = well demonstrated principle.



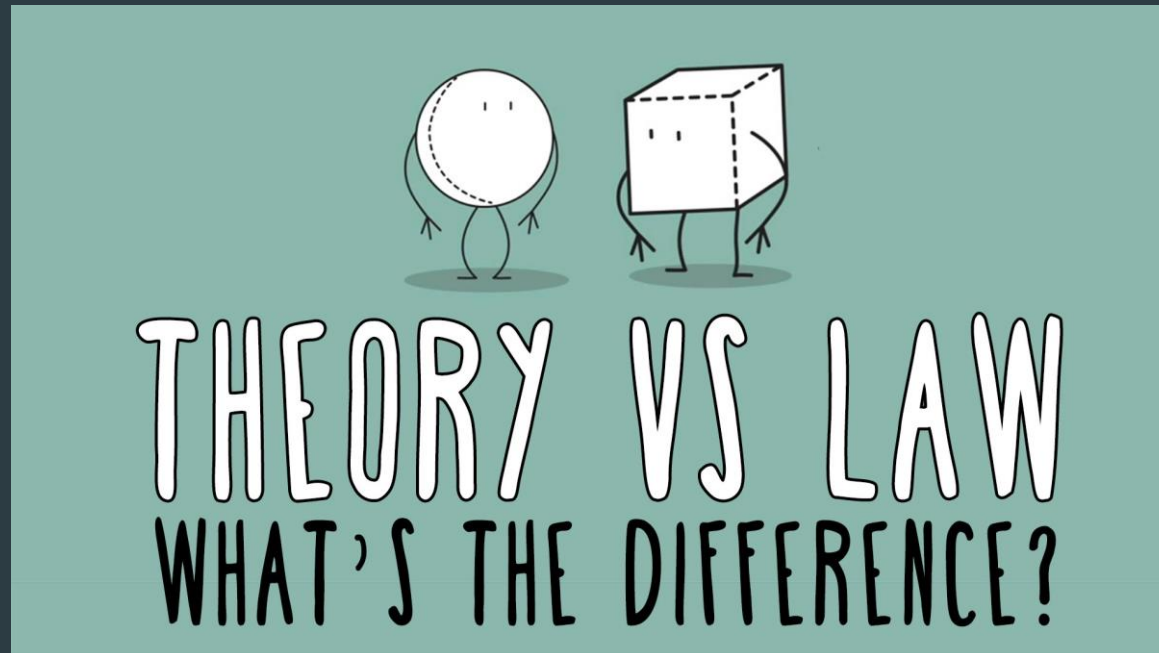
# Scientific Theories

- ❑ a theory is a broad, natural explanation for a wide range of phenomena.
- ❑ Theories are concise, coherent, systematic, predictive, and broadly applicable, often including and summarizing many hypotheses.
  - ❑ Bottom Line: **A theory explains why something happens!**



# Scientific Laws

- ❑ Laws provide general rules for what we expect to happen. (WHAT)
  - ❑ Laws do not explain why something occurs just that it does.



# All Scientific Knowledge is Tentative!

- ❑ New data and observations affects current laws, theories and hypotheses.
- ❑ When a law, theory, or hypothesis is shown to be wrong, it is modified or removed.
- ❑ Theories and Laws are never technically “proven.”

**I don't believe  
in evolution,**



**I agree with its  
evidence-based  
conclusions.**