6. Scientists can never be completely OBJECTIVE (non-biased), but they must TRY to be!!

- Previous experiences, emotions, interests, politics, religion, gender, can all affect how someone interprets data.

* This is why scientists collaborate and communicate, and review each other's work!!

7. Scientists do not VOTE on which ideas are "best"! They weigh the evidence and debate to make individual decisions!

* Disagreements are a STRENGTH * of science!!

8. Science can be done poorly :(

"Pseudoscience" = false science; does not follow the rules of science

natural world (observations)
evidence
testable
repeatable

but this is RARE!

* Science can be misused → fraudulent!
Scientists may be motivated by $, curiosity, passion, ambition, politics.

Words to AVOID:

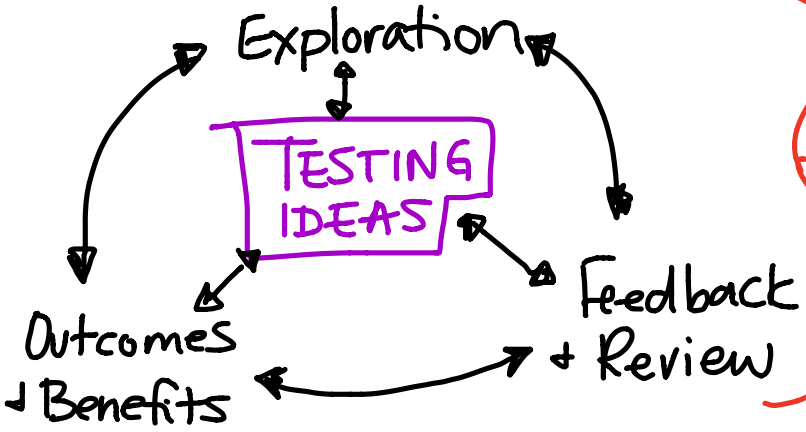
Use instead:

- Belief → evidence, supported by
- Proof/proves → " "
- Truth → tested, shown
- Facts → knowledge, information, idea, concept, data, evidence, observations

Scientific Methods

There a multiple ways to investigate the world!

"PtEOC" - too simple! Not the reality of what scientists do



Another Example of a Scientific Method"

Scientific PROCESS

Scientists also use:

- Comparison
- Analogies
- Patterns
- Meta-Analysis → look at lots of other studies!