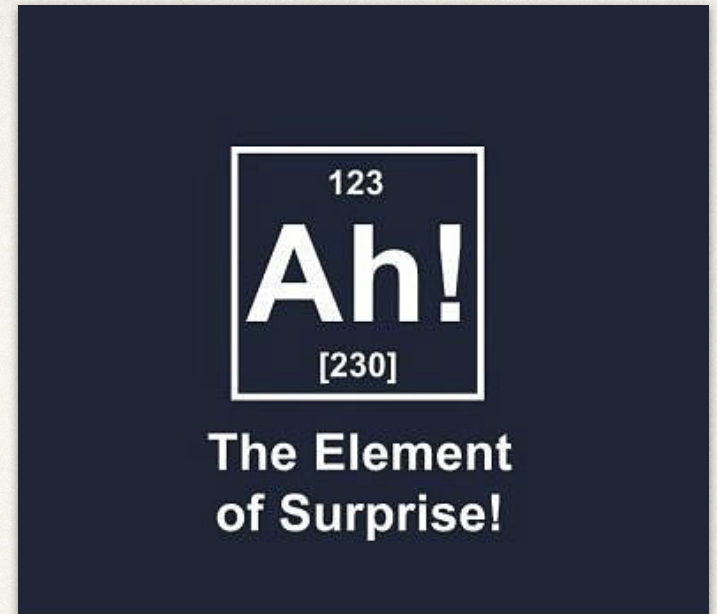
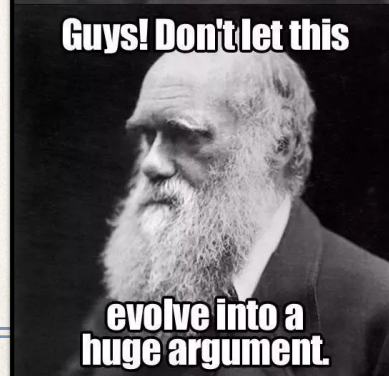
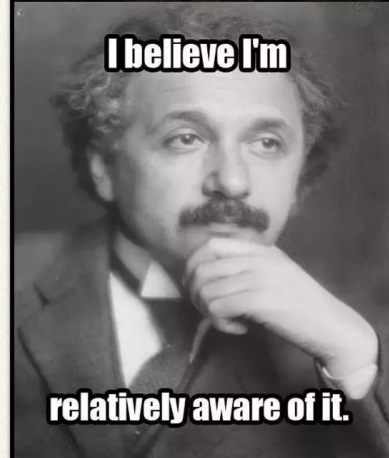
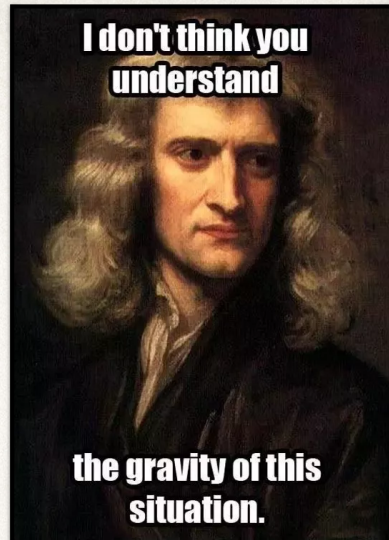


AOK: The Natural Sciences
Methods; Ethics; Limitations

Theory of Knowledge / Mr. Nigro



HOW TO DO SCIENCE

Why do some students get sick in a pandemic and others don't?

- ❖ Introvert or extrovert
- ❖ Honors level student
- ❖ Neat Freak or Slob Monster
- ❖ Color of underwear
- ❖ Middle name
- ❖ Fluffy pets
- ❖ Music preferences
- ❖ Parents' attitudes
- ❖ Brand consciousness

Which of these variables might be significant factors? Why?

What other variables should be considered?

Devise an experiment using the Scientific Method to address this question.



HOW-TO SURVIVE
A DEADLY GLOBAL VIRUS

Could we? Should we? Would we?

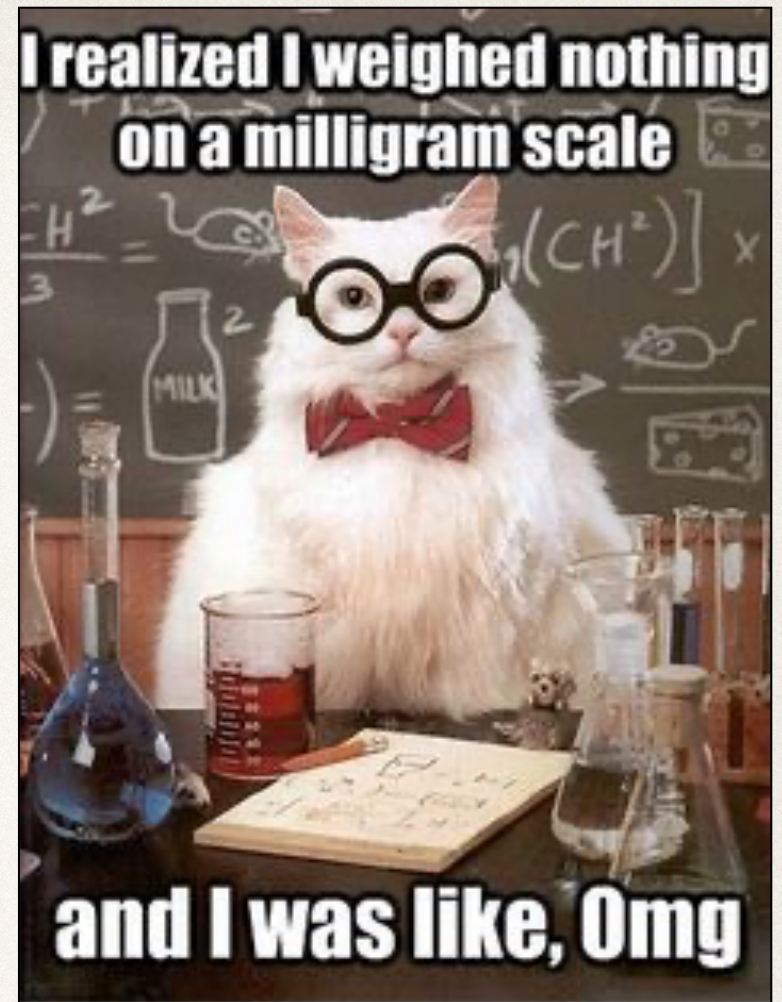
- ❖ Genetically modified foods
 - ❖ Climate Change
 - ❖ Fracking
 - ❖ Vaccination
 - ❖ Human cloning
 - ❖ Artificial Intelligence
-

Consider your attitude toward each of these topics. In each case, what moral and/or ethical issues might be in play? What arguments in favor or against do you weigh most heavily? Who should judge in these matters?

*No matter where I run
I cannot escape myself*



- ❖ Given the problems with the inductive process (particular to general), how can science be reliable?
- ❖ How does one know in advance what factors (to measure, etc.) will be relevant to the final explanation?
- ❖ How can we build understanding of the world independent of the human act of measuring it?
- ❖ How can it be that scientific knowledge changes over time?



AOK: The Natural Sciences

Knowledge Questions

1. Why did people accept these interpretations or observations?
2. Why do people no longer accept them?
3. Is the obsolete interpretation now irrelevant to science or has it led to refined versions that are currently accepted?

- ❖ spontaneous generation
- ❖ miasma theory of disease
- ❖ caloric theory
- ❖ N-Rays
- ❖ Lamarckian inheritance
- ❖ phlogiston theory
- ❖ steady state theory
- ❖ luminiferous ether

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Obsolete Science: Pick two and answer the three questions

