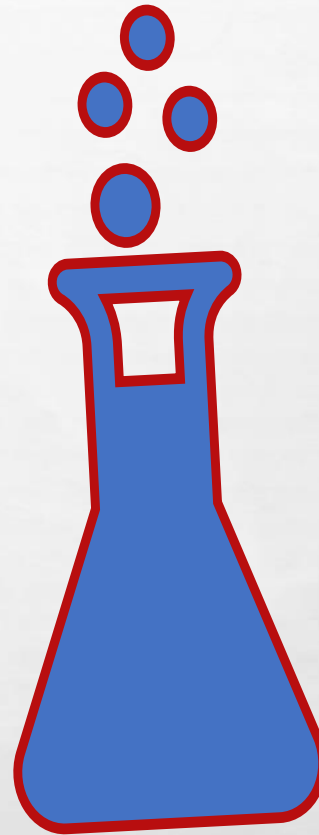


**HYPOTHESIS
DEVELOPMENT
RESEARCH CORE
SCIENCE**

SCHOOL YEAR 2021-2022

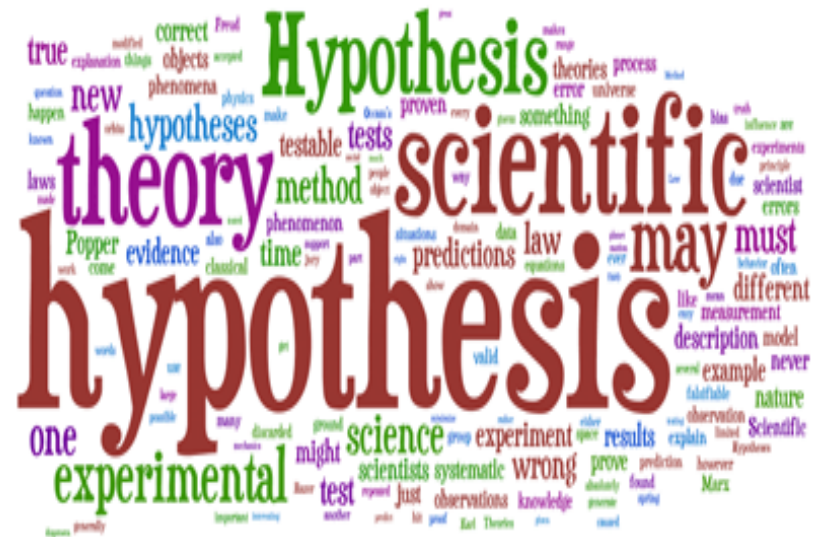
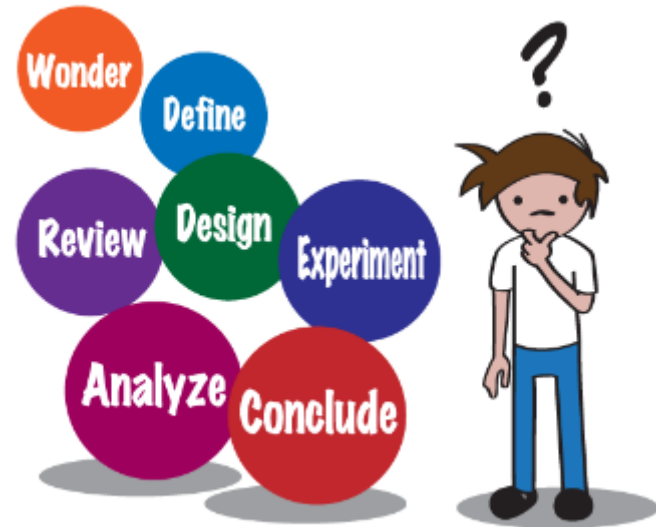
DR. WARDISIANI:

JWARDISIANI@PTHS209.ORG



WHAT IS A HYPOTHESIS?

- A TESTABLE STATEMENTS THAT PROVIDES THE RESEARCHER'S BEST GUESS AT AN ANSWER TO A RESEARCH QUESTION
- HYPOTHESIS ARE TYPICALLY DERIVED FROM THEORIES, ALTHOUGH SOMETIMES IT WORKS IN REVERSE AND TESTING HYPOTHESES HELPS RESEARCHERS BUILD THEORIES.





PROVING YOUR HYPOTHESIS

- **IF IN YOUR STUDY YOU FIND EVIDENCE THAT SUPPORTS YOUR HYPOTHESIS THIS DOES NOT MEAN THAT YOU ARE AUTOMATICALLY CORRECT.**
- **YOU MAY BE RIGHT, BUT YOU HAVE NOT PROVEN YOUR CASE.**

PROVING YOUR HYPOTHESIS CONTINUED

- **WHY IS IT THAT IF YOU FIND EVIDENCE TO SUPPORT YOUR HYPOTHESIS YOU SHOULDN'T ASSUME YOUR HYPOTHESIS IS CORRECT?**
- **ITS POSSIBLE THAT IT'S ONLY CORRECT FOR WHATEVER DATA YOU LOOKED AT. IT MIGHT BE THAT IF YOU HAD MORE DATA- OR DATA FROM DIFFERENT SOURCES OF DATA OVER A LONGER TIME FRAME-THE RESULTS WOULD BE DIFFERENT. YOUR DATA MIGHT BE INCOMPLETE, MISSING, OR FLAWED.**



THEORY AND HYPOTHESIS

- **THERE MIGHT BE ALTERNATIVE EXPLANATIONS THAT ACCOUNT FOR THE RELATIONSHIP YOU SUGGESTED.**
- **THEORY AND HYPOTHESIS INTERSECT CLOSELY. THEORY, BUT INCREASING YOUR UNDERSTANDING OF WHY AND HOW THINGS HAPPEN – AND SOMETIME THE CAUSAL MECHANISMS UNDERLYING THE WHY AND HOW – CAN ALSO HELP YOU ASSESS YOUR HYPOTHESIS AND FINDINGS.**



HOW TO WRITE A STRONG HYPOTHESIS

- **SOME RESEARCH FOCUSES JUST ON DEVELOPING THEORIES-AND THAT'S OK.**
- **ULTIMATELY IF YOUR GOAL IS TO INCREASE KNOWLEDGE OR TO BE REASONABLY CONFIDENT THAT YOUR IDEAS ARE CORRECT, YOU NEED TO EXAMINE THE EMPIRICAL EVIDENCE.**
- **THAT DOESN'T ALWAYS REQUIRE A HYPOTHESIS TO TEST; SOMETIMES YOU ARE LOOKING FOR THEMES, OR DESCRIBING YOUR FINDINGS, OR ENGAGING IN CRITICAL ANALYSIS.**





THE RESEARCH PROCESS

- **OTHER TIMES YOU ARE DOING RESEARCH TO FIGURE OUT THE VARIABLES AND THAT MIGHT PLAY A ROLE IN AFFECTING YOUR OUTCOMES OF INTEREST.**
- **YOU CAN'T REALLY WRITE A HYPOTHESIS, BECAUSE YOU DON'T YET KNOW WHAT VARIABLES TO USE.**
- **THIS IS COMPLETELY REASONABLE; HYPOTHESIS TESTING MIGHT COME LATER OR NOT ALL.**

HAVING A RESEARCH MINDSET

- **SO, IF YOUR PROJECT DOESN'T LEND ITSELF TO HYPOTHESIS TESTING, THAT'S FINE, BUT I DO A LOT OF RESEARCH DOES INVOLVE CONSTRUCTING TESTS TO EVALUATE HYPOTHESES.**
- **HAVING A HYPOTHESIS CAN BE AN ADVANTAGE, BECAUSE IT PROVIDES GUIDANCE FOR LEGAL RESEARCH.**
- **JUST AS A RESEARCH QUESTION PROVIDES MORE GUIDANCE THAN A SIMPLE TOPIC, IF HYPOTHESIS CAN HELP GUIDE YOU TOWARDS A SPECIFIC RESEARCH DESIGN AND PROVIDE A FRAMEWORK FOR ANALYSIS**



RULES FOR HOW TO WRITE A STRONG HYPOTHESIS

- **A HYPOTHESIS IS TYPICALLY PROBABILISTIC. IF YOU STATE A HYPOTHESIS IS AN ALL-OR NOTHING SORT OF WAY, THERE IS NO ROOM FOR NUANCE, RANDOM CHANCE, OR EXCEPTIONS.**
- **USE TERMS LIKE “MORE LIKELY” OR “LESS LIKELY” RATHER THAN ALWAYS OR NEVER”.**

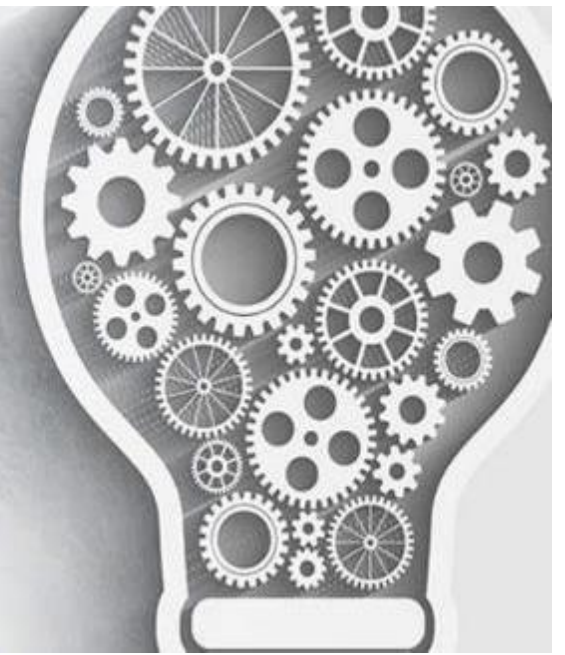
HYPOTHESIS



QUESTION?

COMMENT?

CONCERN?



**THANK YOU
FOR YOUR ATTENTION 😊**

