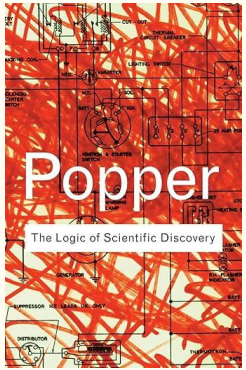
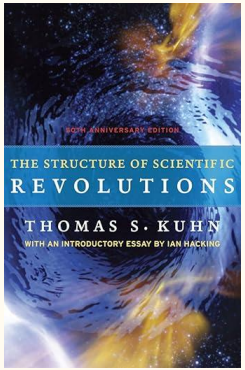
LECTURE IV

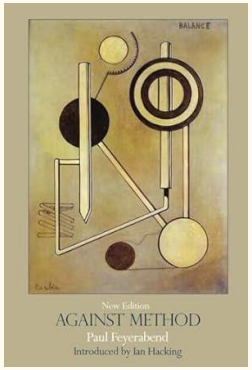
FEYNMAN LECTURES SCAVENGER HUNT

Foundations of Science I
Prof. Overbey
4/15/25

CHOOSE 2 FOR READING WEEK







TECHNICAL LECTURE REFLECTIONS

Assignment Link

PRACTICE EXAM SESSIONS

Starting next week, we will do graded oral exam in-class practice sessions (15% of grade).

- 2 students will present per week.
- They will each receive one question, one week in advance.
- Classmates will perform peer-review during class to identify weaknesses in the answer.

Each week will have questions from a different topic:

1. Classical Mechanics
2. Thermodynamics
3. Electromagnetism
4. Energy
5. Quantum and Relativity

PRACTICE STRUCTURE

Presentation Component (4-7 min)
Student will present the answer to their question

- **A whiteboard will be available**
- **Target 4-7 minutes**
- **Use the answer structure from lecture**
- **Class will take notes**

Blueprint

1) Restate the Question
2) State the Key Concept(s)
3) Present the Relevant Equation(s)
4) Interpret the Result
5) Conclude your answer

Peer Review Component (15-20 min)
Student will leave the room and the class will evaluate their answer

- **Similar to the process of scientific peer-review**

Defense Component (10 min max)
Student will re-enter the room and answer questions from the class to defend their answer.

CLASS SCHEDULE

Date	Topic	Students (2 max)
Tue Apr 22	Classical Mechanics	KC
Tue Apr 29	Thermodynamics	PC
Reading Week	–	–
Tue May 13	Electromagnetism	NG, HW
Tue May 19	Energy	GP, LF
Tue May 27	Quantum and Relativity	RN, RJ

CLASSICAL MECHANICS

Question Options

1. Why do astronauts feel weightless on the International Space Station?
2. Why does pulling a wagon slowly require less effort than pulling it quickly and stopping suddenly?
3. **Why does a car need to slow down before taking a sharp curve?** (KC)

REMINDERS

- All answers must be based on content from the **Feynman lectures**.
- Equations and concepts outside of the Feynman lectures will **not be accepted**.
- LLMs - such as ChatGPT, Claude, and Perplexity - may steer answers in the wrong direction by pulling from content outside these lectures and should be used with extreme caution.
- HOWEVER, **LLMs are an extremely useful tool for understanding content from the Feynman lectures** that you may find challenging and are highly **encouraged** for that purpose.

USING THE FEYNMAN LECTURES TO UNDERSTAND:

CLASSICAL MECHANICS
THERMODYNAMICS
ELECTROMAGNETISM
ENERGY
QUANTUM AND RELATIVITY