



8. Magnet and Matchstick

Reporter: Christos Michos

Opponent: Taisia Kashintseva

Reviewer: David Fankhauser

Team Greece-Raptou

Team Russia-Element

Team Switzerland





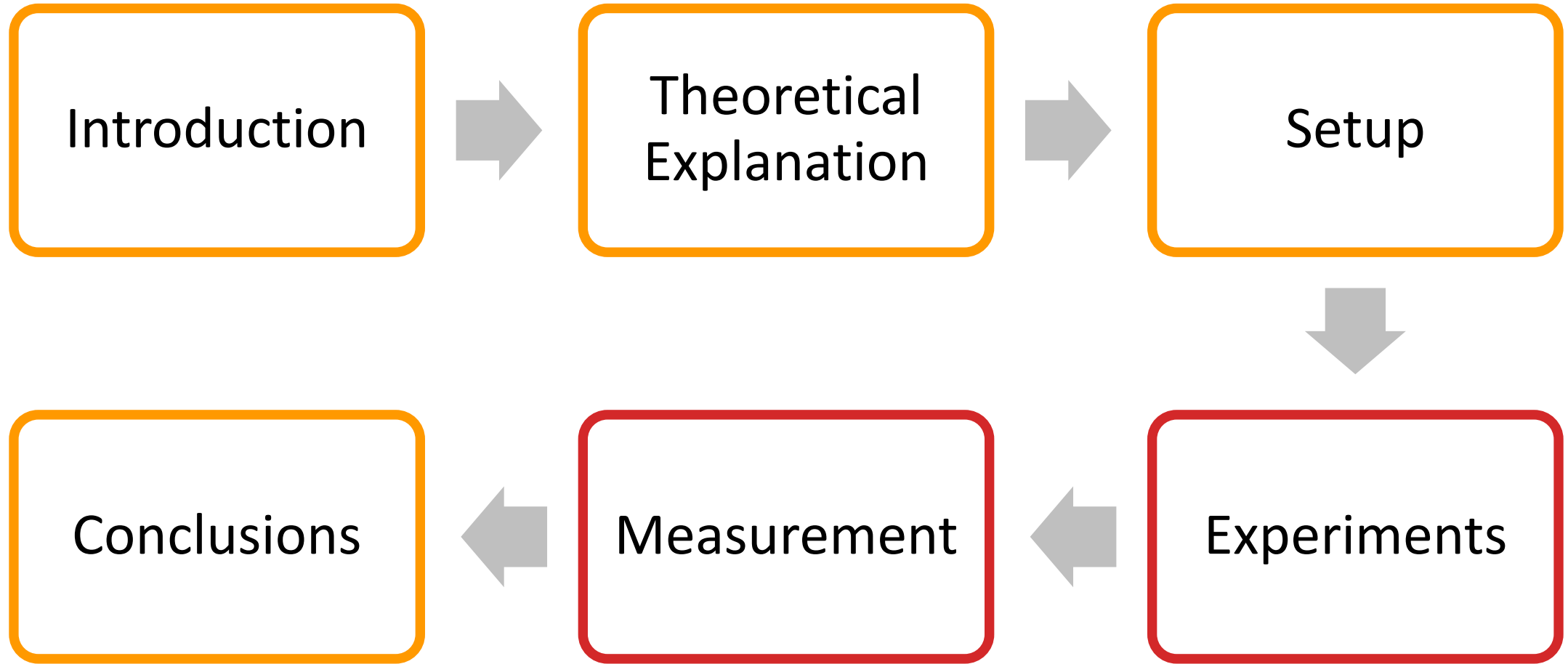
Task


A matchstick is not attracted to a magnet, however the **head of a burned matchstick** is attracted by a **strong magnet**. Investigate the reasons and the role of **relevant parameters**.

- Magnetic attraction & properties
 - Why does a burned matchstick show magnetic properties?
- Parameters




Outline of Report



 Excellent

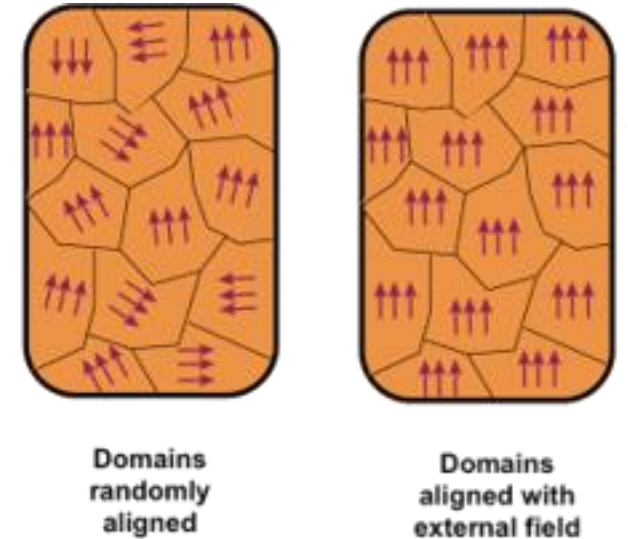
 Good

 Needs Improvement



Explanation of Theory

- Unexplained theory – text
- Lack of ferromagnetic material understanding
- Correct matchstick attraction equations
- External procedure explanation
- No justification of hypothesis
- 2 I.V.'s in investigations → control?
 - Reliable data collection?



Rating: 2/6



Statement of Opponent

- Identified lack of aim in study
- Identified lack of error
- No mention of weak analysis / lack of relationship between strength and results
- Did not understand magnetism theory
 - Equation (Fe_2O_3)
- Thought that match was magnetic before
 - Although clearly stated in problem

Rating: 2/6



Performance

Reporter

2/6

- + Range of theory
- + Used various magnets
- Too much text
- Lack of theoretical understanding
- Experimental errors
 - Inaccurate measurement with 2 I.V.'s
- No graph → no relationship

Opponent

2/6

- + Lacking aim
- + Picked up on excluded error
- Didn't pick up on weak analysis
- Unclear slides
- Thought that matchstick was magnetic before combustion
- Unable to answer questions

