



Popping Buoy

Topic 4

Reviewer: Anna Arsenou



International Young Naturalists' Tournament



Task



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A **light ball** is held **underwater** and then **released**. The ball may **sometimes pop** **above** the **water surface**. Investigate this **effect** and the **role of important parameters**.



Reporter



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Strengths

Weaknesses

Theory relevant to experiment-multiple equations

Did not explain each how parameters of the equations would be used in the experiments

Detailed explanation of the effect-split in steps

No graph titles, Axes not labeled clearly

Many graphs that were effective presentation of results

Did not mention how height was mentioned

Effective visual aid

Dependent/Independent Variables missing

Gave answers to opponent that showed understanding+supp

Error bars the same?

Opponent

Strengths	Weaknesses
Effective question about the experimental method which was not mentioned (volume of water)	Vague statements (“experiment was good”)
Noticed that results weren’t supported in relation to theory	full focus on report-didn’t introduce new material
Mentioned that there were theoretical parameters missing	Had many suggestions-not focused on actual experiments conducted by reporter
Mentioned the absence of some parameters that could have been tests (different water densities, different ball sizes)	Said that there weren’t many formulas but there were
	Did not notice the missing dependent variables, different sizes of balls

Discussion Topics

Opponent Asked:

Did you take into consideration buoyancy?

Reporter Replied:

- Buoyancy was taken into considerations and buoyancy formulas

Our opinion:

Yes, we agree that is should be considered, however reporter did not show evidence of this consideration

Discussion Topics

Opponent Asked:

Does water loss affect the accuracy of the results?

Reporter Replied:

Does not believe that the amount of water loss affects the result.

Our opinion:

Discussion Topics

Opponent Asked:

- Was drag force considered?

Reporter Replied:

- Only the resistance force is present whereas the drag force was discarded

Our opinion:



Suggestions

For Reporter:

- Focus on details such as axis labels, graph titles, figures titles
- specify the dependent variables, the materials used on a separate slide for maximum clarity

For Opponent:

- Focus on the reporter's experiment



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Thank you