



Topic 12: Onion Cells

Opponent: Anna Arsenou



International Young Naturalists' Tournament



Task



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Investigate the effects of various salts on the structure of onion cells.



Theory



Strengths

Explained theory of osmosis/plasmolysis

Explained concave vs convex plasmolysis

Visual aid

Weaknesses

Didn't link to experiment?

Didn't mention colligative property of osmosis-vie

Variables are not clear - control variables, independent, dependent

Experiment



Strengths

Used moles to measure the salt concentration

Used 9 different salt solutions

Weaknesses

Used same onion but different skins

Set up



Strengths

Stated what solutions she used

Weaknesses

No photos of her set up present

No materials - tool list present

Results



Strengths

Weaknesses

References results to the hypothesis

No tables or raw data evident

Units and graphs are evident

No evidence of standard deviation (for 20 trials)

Incorrect graphs, for the data collected scatter graphs should be used

Labels cannot be understood

Conclusion



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Strengths

Hypotheses in conclusions

Future suggestions included

Weaknesses

No suggested improvements

Thank you